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FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Chapter 4, Subchapter 7, Group 2, Article 10, New Section 3395
of the General Industry Safety Orders

Heat Illness Prevention

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 45-DAY PUBLIC COMMENT PERIOD

There are no modifications to the information contained in the Initial Statement of Reasons except for the following substantive, non-substantive and sufficiently related modifications that are the result of public comments and/or Board staff evaluation.

The scope and application have been modified to specify in subsection (a)(1) that this standard applies to all outdoor places of employment. An exception is added that will exempt certain industries from compliance with subsection (e), High-heat procedures. Subsection (a)(2) specifies industries that will be required to comply with all provisions of the standard, including subsection (e) High-heat procedures. These industries were identified based on their incidence of heat illness or fatalities as monitored by the Division from 2005 to the present. This change is in response to numerous comments to the Board that the industry groups that are not to be subject to the high-heat procedures have demonstrated an ability to protect their employees by complying with the requirements of the existing standard.

Subsection (b) has been modified to include definitions of “landscaping” and “oil and gas extraction” as these terms are not defined elsewhere in Title 8.

Subsection (c) has been modified to remove the qualifying language regarding potable drinking water. This change is in response to numerous comments to the Board that the wording is unclear, for regulatory purposes, and can be already inferred by the existing references to Sections 1524, 3363, and 3457.

Subsection (d)(4) has been modified to provide exceptions to the requirement to provide shade structures as required by subsection (d) for situations in which the shade structure creates an unsafe environment, or it is infeasible for shade to be erected or provided (for instance, employees reading residential utility meters throughout the work shift). The exception requires the employer to provide alternative procedures that provide equivalent protection. This change is in response to comments to the Board describing specific incidents of shade structures creating safety hazards and numerous examples of highly mobile work that would be severely impacted by attempting to erect shade at each brief stop.

Subsections (f)(1) and (f)(2) have been modified to change the requirement for providing training about heat illness before beginning outdoor work. Employees would be required to be trained before beginning work that is reasonably anticipated to result in exposure to the risk of heat illness. Supervisors would be required to be trained before supervising employees who are performing work that should reasonably be anticipated to result in exposure to the risk of heat illness. This change is in response to many comments to the Board and at the advisory meeting of November 16, 2009, that it would be counter-productive to require heat illness training for employees and supervisors if they are hired or assigned to outdoor work during colder seasons.

Summary and Response to Written and Oral Comments:

I. Written Comments

Jay Zamora, Pacific Technical Resources, by email dated September 9, 2009

Comment #JZ1: The commenter objects to the amendments to subsection (c) regarding the provision of training and the importance of frequent consumption of small quantities of water, up to four cups per hour under extreme conditions of work and heat. How can employers be required to train employees to drink water, up to four cups per hour? What if the employee doesn't want to drink it, should the employee be disciplined? It is becoming increasingly burdensome on employers to take on personal responsibility that should be the responsibility of the employee. Why should an employer be responsible to train employees on the need to re-hydrate, when heat exhaustion happens more frequently outside of work activities? When employees visit the beach or Disneyland, there are no such provisions for hydrating with up to four cups an hour, yet a large number of people visit such places without the need for someone or something to remind them to hydrate. It is equally important to have a nutritional meal such as breakfast before starting any strenuous activity such as jogging or mowing a lawn. Should an employer have to train employees on the benefits of eating a healthy breakfast?

Response #1: The Board notes that the requirement in subsection (c) is to provide important information to employees to preserve their health while working in adverse conditions. It is crucial for employees to believe that they can drink water as needed without reprisals. When an employer properly provides training, employees will see access to water as a normal and permissible part of work. The Board also believes that working in a high heat environment cannot be compared to vacationers in a hot environment who can at any time leave the area or obtain fluids when they wish.

Comment #JZ2: The commenter objects to the amendments to subsection (d) regarding the term "believing a preventative recovery period is needed." This language is very broad and allows for a wide interpretation with respect to "believing" a preventative recovery period is needed. With the language as written, is becomes an avenue for

employees to take advantage of a situation under the guise of heat illness with no means to inquire as to an employee's veracity.

Response #2: The Board notes that there is currently no means for an employer or employee to objectively monitor the physiological demands of an individual in response to high heat, outside of a medical facility or laboratory and without the use of invasive personal monitoring devices. Consequently, the more subjective criteria of how an employee is feeling must be utilized as the best available means for identifying when recovery from heat illness is needed. The Board believes that the majority of employees who are affected by this regulation will be disinclined to "take advantage" of a process that will lessen their pay when that is tied to actual production.

Comment #JZ3: The commenter objects to the amendments to subsection (d) regarding "for a period of no less than five minutes…" as it does not provide for a cap or a limit as to the length of time an employee can "believe" a recovery period is needed. This is largely left up to the employee and some employees may take advantage of this section as written. The section is careful to list a minimum; however a maximum is not provided, why?

Response #3: Medical experts testifying during the advisory meetings and Board hearings generally agree that recovery from heat illness is not a brief process. None of the presenters with expertise believed that significant recovery could be achieved in less than five minutes. Most believed that substantially more time should be provided for that process. In the absence of a prescriptive time period, the process depends upon the more subjective perception of the employee as noted in the response to comment #JZ2.

Comment #JZ4: The commenter questions the amendments to subsection (d) regarding why the temperature of 85 degrees was selected as the threshold or trigger point? Being based in Southern California where most days are at or above 85 degrees it seems like this trigger is rather low.

Response #4: At the November 9, 2009, advisory meeting the Division reported from its compliance experience that the number of calls regarding heat problems to Division offices increases when the local temperature reaches and exceeds 85 degrees. Heat illness cases are also associated with a general threshold of 85.

Comment #JZ5: The commenter questions the amendments to subsection (e) regarding what determines or defines "specific information establishing the employee is acclimatized to work in heat of excess of 95 degrees?"

Response #5:
The Board believes that basic documentation of the work showing the time period and location of work would be the minimum substantiation. A record showing the location could be used to verify that a person has been in high temperatures by consulting the weather service records, if the location is not in the same general area as the hiring

employer. Although this might seem to be burdensome to some, the Board notes that it is to the advantage of the employer to apply the exception for restricting the work time of a new hire.

Comment #JZ6: The commenter objects to the amendments to subsection (f) regarding requiring certain supervisors be trained on how to monitor weather reports and how to respond to hot weather advisories. The employer should not be in the business of interpreting weather reports nor be required to learn how to interpret changing weather conditions.

Response #6: The Board believes that inadequate acclimatization can imperil anyone exposed to conditions of heat and physical stress significantly more intense than what they are used to. Employers are responsible for the working conditions of their employees, and they must act effectively when conditions result in sudden exposure to heat their employees are not used to. Thus, monitoring the weather is a crucial step in ensuring that employers stay alert to warnings of a heat wave or sudden increases in temperature and that this information is taken into consideration to determine if the work schedule, work-load and number of scheduled water and rest breaks will require modification.

Comment #JZ7: The commenter objects to the cost statement for the proposal. It became increasing clear that the Occupational Safety and Health Standards Board (Board) does not consider the employers point of view or the cost burden of any new legislation or changes in existing legislation. To suggest that the Board is not aware of any cost impact that a representative private person or business would necessarily incur in reasonable compliance with the proposed action is simply not true and is blatantly misleading. Every time the Board changes or adopts new legislation there is a cost to the employers. With each of these proposed changes, I have to stop my working crews and bring each one of them to the office to be trained on the new law. This presents a significant challenge and expense to an already cash strapped business, industry and economy.

Moreover, the Board appears to be grossly out of touch with most if not all employers. This is evidenced by the Board's comment regarding no fiscal impact on a private person or business with the proposed changes to this regulation. Further, the Board could have used this opportunity to address real issues such as:

- Working in a full body 40 Cal/CM2 Arc Flash Suit in a work environment with temperatures of 70 degrees with limited visibility
- Working in a Confined Space in temperatures of greater than 85 degrees

In closing, it is offensive that time and energy is being put forth into such legislation and instead of educating both employers and employees alike in practical issues we are instead choosing to educate employees on when to drink water. The commenter would welcome the opportunity to host one or more of the Board members at his facility to educate them on practical issues that are of concern to employers and employees.

Response #7: The Board acknowledges that the implementation of new requirements usually requires additional training for employees as to identifying a hazard and how to properly avoid it in a manner that is consistent with the regulation. It should be noted that the requirement to train employees about the issues proposed are already addressed by many employer's current training programs. In stakeholder meetings with affected employers, they reported that the proposed training was commonly done and any minor costs incurred were offset by improved efficiency and productivity of properly trained workers. Please also see the response to comment #JR5. The Board notes that the comments about welding and confined space are better addressed by current Title 8 standards for those hazardous work operations.

Dave Harrison, Special Representative, Operating Engineers Local Union No. 3, by letter dated September 18, 2009

Comment #DH1: The commenter objects to the amendments to subsection (d) since subsection (d) lacks an "exception for shade requirements in the construction industry, when erecting shade will create a higher hazard or is unfeasible." The commenter recommends to the Board that Section 3395(d) be modified.

Response #1: The Board acknowledges that many individual commenters expressed the generalized concern that there are a number of circumstances in which erecting shade is problematic from a feasibility and even a safety perspective. This issue was discussed at length at the November 9, 2009, advisory committee meeting, and the proposal has been modified to take account of infeasibilities and the impairment of safety.

Carolyn Cavecche, Mayor, City of Orange, by letter dated September 22, 2009

Comment #CC1: The commenter objects to the water requirements as being ambiguous and is concerned that they may be cited for not being in compliance if the water is not at a certain temperature that has yet to be defined. The commenter urges the Board to keep the current definition of "potable" water.

Response #1: The Board concurs that the proposed amendment does not necessarily clarify subsection (c) and believes that the Division can rely on other safety orders for enforcement purposes. Therefore, the Board withdraws that wording from the proposed amendments.

Comment #CC2: The commenter questions the "shade up" requirements, as they will create a significant burden on mobile field crews and impact their work schedule; "we have several mobile crews such as sign crews that can make up to 15 stops per day. Many of these crews will work at location for no more than 10 – 15 minutes at a time." If "shade-ups are required to be up when the temperature exceeds 85 degrees, it may take half that time to put up the shade and then take it down again during each of these stops."

The commenter urges the Board to adopt a shade exception for mobile work crews and maintain the current requirement for access to shade.

Response #2: The Board notes that many employers with continuously moving field crews have expressed this same concern. The Board concurs and proposes that this requirement be amended as noted in the response to comment #DH1.

Comment #CC3: The commenter inquires about the feasibility of the high heat procedures. "The requirement to observe employees for alertness and signs or symptoms of heat illness is vague"… "Because we have some employees who work alone, does this mean we would be required to send a supervisor to check on them every day the temperature exceeds 85 degrees? And how often would they need to observe the employee? Every hour? Every two hours?"

Response #3: Please see the response to comment #CG4.

Comment #CC4: The commenter questions the requirement that employers remind employees throughout the shift to drink plenty of water. "Once again, the vagueness of what is meant by how often?"

Response #4: The Board believes that water provides the body's single best defense against heat other than removing heat exposure itself. Continuous replacement of fluids is critical, so these reminders are important because employees are there to work, and many of them may not feel how urgently their bodies need water. The frequency of the reminders will not be the same for all operations, as it will be based on the specific conditions present at each individual site, such as ambient temperature, relative humidity, radiant heat, workload intensity and duration, personal protective equipment, etc. Please also see the response to comment #ET5.

Comment #CC5: The commenter objects to the mandate to provide close supervision of an employee for the first 14 days on the job, as an "infeasible monitoring requirement" that can lead to misinterpretation.

Response #5: The Board believes that inadequate acclimatization can imperil anyone exposed to conditions of heat and physical stress significantly more intense than what they are used to. New employees are among those most at risk of suffering the consequences of inadequate acclimatization, heat wave or not. Just as one would not assume that a new employee immediately and on the first day understood their new job assignments and company policy and procedures, one would not assume that a new employee becomes acclimatized on the first day. The Board believes that close supervision of new employees is necessary to stay alert to the presence of heat related symptoms.

Comment #CC6: The commenter notes that it is her understanding that "there has been no occupational heat illness fatalities recorded in 2009 and the majority of the heat illness

hospitalizations in prior years have occurred in the agricultural industry." The commenter adds that "It is unfair and counterproductive… to be required to comply with additional layers of regulations that will result in minimal additional health protections for our employees but will severely have an economic impact of our resources." The commenter recommends to the Board that "if Cal/OSHA finds it necessary to develop additional heat illness regulations… they should only be applied to the agricultural industry" and urges the Board to not "support the proposed changes to the Heat Illness Prevention regulation as it is currently written."

Response #6: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to Comment #JF1.

Garth Patterson, Heat Relief Solutions, by letter dated September 22, 2009

Comment #GP1: The commenter recommends to the Board that Section 3395 include an option for misting fans or a relief station equipped with cooling measures including first aid, seating, cool water and shade as an additional form of protection for outdoor workers in agriculture. "The technology now exists to make this an affordable addition to the safety plan and protect workers from heat stroke and death. The body core temperature is the factor that causes death rapidly if untreated. Placing a person in 100 degree shade when in heat stress is not the solution the person needs to be cooled immediately..."

Response #1: The Board believes that misting equipment is already described in the standard, and it is unclear what is meant by a "relief station."

John Robinson, CEO, California Attractions and Parks Association Inc, by letter dated September 22, 2009

Comment #JR1: The commenter urges the Board to exclude California's theme, amusement and water parks from the proposed amendments of Section 3395. "Industries are not all the same in terms of heat illness risk factors, methods of control, or emergency response. One size rule does not fit all..."

Response #1: The Board concurs that not all industries should be required to adopt the high heat procedures. Please see the responses to comments #JF1 and #WH1.

Comment #JR2: The commenter questions the amendments of subsection (c) regarding the quality of drinking water and the additions of "fresh, pure, suitably cool." "These qualifiers were taken from the standard for agriculture… They are not necessary for theme, amusement and water parks…"

Response #2: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #JR3: The commenter objects to the amendments of subsection (d) regarding access to shade, the requirements of having shade up at 85 degrees and for 25% of the employees, as no allowances are made for the feasibility of erecting that much shade in temporary or transient locations.

Response #3: The Board agrees that erecting shade for employees who are constantly relocating throughout the shift should not be required and has proposed revised language as noted in the response to comment #DH1; however, it should be noted that this exception would not apply to a location that is simply "temporary" since the term can be construed to mean anything from a few minutes to a few years.

Comment #JR4: The commenter questions the amendments of subsection (e) regarding high heat procedures, as these procedures "are entirely new and impose additional burdens. Nothing in the record indicates that the current regulations followed by theme, amusement and water parks are insufficient for high heat conditions."

Response #4: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #JR5: The commenter objects to the amendments of subsection (f)(1) regarding employee training and prohibiting outdoor work until the employee has received the training required by 3395(f).

Response #5: The Board notes that there have been comments both supporting and objecting to the proposed language requiring employers to train employees and supervisors about the hazards of heat illness before they begin working outdoors. The capriciousness and rapid occurrence of non-seasonal higher temperatures is a part of the state's climate and can be problematic. However, the Board acknowledges that training employees and supervisors about heat illness during colder seasons may be counter-productive since the perception of the problem may be low, and employees and supervisors might need to be trained again when the warmer weather begins. Consequently, the proposal has been modified to require that employees are to be trained before beginning work that is reasonably anticipated to result in exposure to the risk of heat illness. Similarly, supervisors would be required to be trained before supervising employees who are performing work that should reasonably be anticipated to result in exposure to the risk of heat illness. The Board further notes that if there is an unseasonal onset of high temperatures, employers would be required to provide the necessary training before permitting the employees and supervisors to be exposed.

Joel Cohen, MPH, CIH, CIHC Board Member, Project Manager and Howard Spielman, PE, CIH, CSP, CEHS, CIHC President, California Industrial Hygiene Council, by letter dated September 24, 2009

Comment #JC1: The commenters are in favor of the proposed amendments to Section 3395. However, the commenters are concerned with the 'science" behind the proposed changes as is related to California employment outside of agriculture. The commenters urge the Board to consider another option for non-agriculture industry employers and recommended changes.

The commenters recommend that the Board require that the program be in writing and include a responsible person, procedures for acclimatization, procedures for recognizing and addressing combined environmental factors, factors that affect and/or offer relief to the workers (i.e., clothing, work/rest regimen, etc.), and procedures for addressing the individual physical condition of the worker. The commenters suggest that as an 'optional' requirement "employers conduct heat strain physiologic monitoring using techniques such as heart rate, body core temperature or recovery heart rate.

Response #1: The Board recognizes that there is indeed an extensive body of scientific research that has compiled evidence identifying the many physical and physiological factors that affect the body's response to heat. The Board has sought to assure that the criteria used to trigger specific requirements have been based on this evidence. However, the Board also acknowledges that the factors that have been identified and the various algorithms, such as by the armed forces, that have been developed to predict when heat levels and conditions can potentially harm employees rely heavily on utilizing instrumentation and knowledge that are beyond the means of the average employer in the industries, besides agriculture, that have had the highest incidence of heat illness or fatalities. The Board believes that the recommended procedures from the commenters are scientifically grounded, but there are other avenues that employers who wish to adopt a more sophisticated approach may pursue with the Division while complying with the intent of this section. Therefore, the Board declines to adopt the recommended changes as part of the current regulation.

Jay Weir, CSP, OHST, ARM, Senior Manager, AT&T Environment Health & Safety, by letter dated September 29, 2009

Comment #JW1: The proposed changes to the Heat Illness Standard should be limited to the agriculture and construction industries. The newly proposed Heat Illness Standard changing Title 8 Section 3395 was created largely in reaction to problems perceived in the agriculture and construction industries. Existing Title 8 Section 3203 and the current Section 3395 Heat Illness regulation already adequately protects safety and health in our industry and most others throughout the State. The proposed additions to the current standard are unnecessary for general industry and should be limited in scope to agriculture and construction.

Response #1: The Board has determined that some of the proposed amendments should be applied to all industries; however the Board concurs that imposing the high heat procedures in subsection (e) on all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #JW2: The proposed new section 3395(d)(3) should be revised so that the test of when a worker may take a cool-down rest includes some objective component. While individuals respond differently to hot conditions, and therefore some subjective component is appropriate, there needs to be some check on potential abuse. As drafted, the existing language could be read to allow an employee to rest indefinitely in the shade even on a cool day with no risk of heat illness. Therefore, to provide a reasonable check, the last sentence of 3395(d)(3) should be modified.

Response #2: The Board believes that the great majority of the employees who are at greatest risk for heat illness will be disinclined to abuse the system because they are paid on a piece rate basis. The Board also notes that the qualifying phrase suggested by the commenter itself is subject to interpretation and believes that the stakeholders in this rulemaking would not readily agree what conditions would present a risk of heat illness. Therefore, the Board declines to make the recommended change.

Comment #JW3: The newly proposed 3395(e)(4) would require close supervision of new employees for the first 14 days with the only trigger being that one of the days be at 95^{o}F or above. Subsection (e)(4) should be modified.

Response #3: Please see the response to comment #JF2.

Judith Freyman, Vice President, ORC Worldwide, by letter dated September 29, 2009

Comment #JF1: The commenter expressed concerns regarding the applicability of the proposal to "all employers from all business sectors." The commenter states that "According to DOSH data, the overwhelming number of heat illness incidents fall within the agriculture and construction sectors. This data is clear evidence supporting the necessity for additional regulations in those sectors…" The commenter further notes that "There is no such evidence to support the broad scope of this proposed rule. It is a blunt instrument that does not accommodate disparate workplace needs."

Response #1: The Board and Division acknowledge that the data for heat illness and the Division's compliance history do not provide compelling evidence to apply high-heat procedures for all industries. The Division reviewed its latest available data and developed criteria for determining which industries should be required to use them, and has modified the proposal on this basis. Specifically the Division considered the numbers of fatalities and heat illness incidence as reflected by the numbers of workers in an industry group reported by the Employment Development Department (EDD) for 2007. These industries include agriculture, construction, landscaping, oil and gas extraction, and transportation or delivery of heavy materials.

Comment #JF2: The commenter also questions "the need for a tiered approach that requires additional precautionary measures be taken by employers when the temperature exceeds 95 degrees (F)…" The commenter adds that "DOSH has stated a need for

specificity to enhance enforcement efforts…. We applaud those efforts and believe the focus should remain on increasing compliance generally, not complicating the subject by adding additional compliance requirements." If additional high heat procedures are included in the proposed rule, the commenter urges the Board to consider revising it and that the requirement related to the close supervision of a new employee for the first 14 days of employment, include an "exposure time trigger," so that a five-minute exposure does not mandate close supervision for the entire day. The commenter proposes that the language in that paragraph be changed.

Response #2: The Board notes that several stakeholders have urged the Division to increase its compliance efforts, and the Division has reported that it has made a maximum effort within its available resources, and existing mandates. The Board also believes that the Division has used its extensive compliance effort to determine how the existing standard might be made more effective and the proposed amendments to Section 3395 reflect this assessment. With regard to the recommended change to the proposal, the Board acknowledges that there has been concern about the requirement for an employer to closely supervise a new employee exposed to temperatures of 95 degrees or more. The Board believes however that setting a trigger of a four hour exposure period during a shift is not consistent with the concept of gradual adaptation to high heat conditions and declines to make the recommended modification.

LeAnna Williams, CSP, County Risk Control Officer, Department of Risk Management
County of San Bernardino, by letter dated October 1, 2009

Comment #LW1: The commenter expressed concerns regarding the amendments to subsection (c) as being ambiguous and inconsistent with other requirements for provision of water within the standards. The commenter urges the Board to keep the current requirement for "potable" water. "If the intent of 'fresh, pure and suitably cool' is to prevent water from staying in an approved dispenser for an extended period of time, then that should be noted."

Response #1: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #LW2: The commenter questions the amendments to subsection (e) as not being feasible and objective for many of their employees. The commenter urges the Board to consider measurable procedures; "so that as an employer, we can know the expectations of Cal/OSHA."

Response #2: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #LW3: The commenter objects to the amendments to Section 3395, as "no occupational heat illness fatalities were recorded in 2009, and the majority of the heat

illness hospitalizations in prior years have occurred in the agriculture industry." The commenter recommends to the Board that "if Cal/OSHA finds it necessary to develop additional heat illness regulations …that they should only be applied to the agricultural industry."

Response #3: The Board has proposed a modification of the proposal as to the employers who would be required to comply with the additional requirements of subsection (e). This subsection will apply to agriculture and several other industry sectors as described in the response to comment #JF1.

Ken Erwin, Safety and Security Manager, Irvine Ranch Water District, by letter dated October 1, 2009

Comment #KE1: The commenter expressed concerns regarding the amendments to subsection (c), for being vague and is concerned that they may be cited for not being in compliance if the water is not at a certain temperature that has yet to be defined. "By its definition, potable water is fresh and pure and requires no further expounding for emphasis." The commenter urges the Board to keep the current definition of "potable" water and delete the reference of suitably cool.

Response #1: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #KE2: The commenter questions the amendments to subsection (d) as not being practicable and having a significant impact on their operations and employees. "We have several mobile crews that make several stops within a work day. Many of these crews will work at locations for no more than 10 – 15 minutes at a time." If "shade is required to be up when the temperature exceeds 85 degrees, it may take half that time to put up the shade and then take it down again during each of these stops." The commenter urges the Board to adopt a shade exception for mobile work crews and maintain the current requirement for access to shade.

Response #2: The Board agrees that the requirements for erecting shade may not be feasible for all work situations; please see the response to comments #DH1 and JR3.

Comment #KE3: The commenter states that the high heat procedures are not feasible for many of their employees. "The requirement to observe employees for alertness and signs or symptoms of heat illness is vague… Because we have some employees who work alone, does this mean we would be required to send a supervisor to check on them every day the temperature exceeds 95 degrees? And how often would they need to observe the employee? Every hour? Every two hours?"

Response #3: Please see the response to comment #CG4.

Comment #KE4: The commenter questions the mandate that employers remind employees throughout the shift to drink plenty of water. "Once again, how often?"

Response #4: Please see the response to comment #ET5.

Comment #KE5: The commenter objects to the requirement to provide close supervision of an employee for the first 14 days on the job, stating that the monitoring requirements are infeasible for many of their employees. The commenter urges the Board to delete the high heat requirements included in the proposed heat illness regulation.

Response #5: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #KE6: The commenter notes that it is his understanding that "there has been no occupational heat illness fatalities recorded in 2009 and the majority of the heat illness hospitalizations in prior years have occurred in the agricultural industry." The commenter adds that "It is unfair and counterproductive… to be required to comply with additional layers of regulations that will result in minimal additional health protections for our employees." The commenter urges the Board that "if Cal/OSHA finds it necessary to develop additional heat illness regulations… they should only be applied to the agricultural industry" and does not believe that these proposed regulations are applicable to their industry.

Response #6: The Board has proposed a modification of the employers who would be required to comply with the additional requirements of subsection (e). This subsection will apply to agriculture and several other industry sectors as described in the response to comment #JF1.

Lolita Pearson, Safety Officer, San Joaquin Human Resources Division, San Joaquin County, by letter dated October 1, 2009

Comment #LP1: The commenter expressed concern that the water requirements are ambiguous and fears that they may be cited for not being in compliance if the water is not at a certain temperature that has yet to be defined. The commenter urges the Board to keep the current definition of "potable" water.

Response #1: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #LP2: The commenter questions the shade up requirement as not being practical for mobile crews. "We have several mobile crews… who provide structural and roadway repair work that may require them to make multiple (10-20) stops per day. Many of these crews will work at locations for no more than 30 minutes at a time." If "shade is required to be up when the temperature exceeds 85 degrees, it may take half

that time to put up the shade and then take it down again during each of these stops." The commenter urges the Board to adopt a shade exception for mobile work crews and maintain the current requirement for access to shade.

Response #2: The Board agrees that the requirements for erecting shade may not be feasible for all work situations; please see the response to comments #DH1 and #JR3.

Comment #LP3: The commenter notes that the high-heat procedures are not feasible for many of their employees. The requirement to observe employees for alertness and signs or symptoms of heat illness is vague… How often are we supposed to observe our employees...? Because we have some employees who work alone does this mean we would be required to send a supervisor to check on them every day the temperature exceeds 95 degrees?... (and check) Every hour? Every two hours?"

Response #3: Please see the response to comment #CG4.

Comment #LP4: The commenter questions the requirement that employers remind employees throughout the shift to drink plenty of water. "Once again, how often?"

Response #4: Please see the response to comment #ET5.

Comment #LP5: The commenter states that the requirement to provide close supervision of an employee for the first 14 days on the job is an unneeded burden and will dramatically increase the cost of providing services. "What is close supervision? If it means that they are not allowed to work alone for the first 14 days it will have a major impact on our operations." The commenter adds that "The monitoring requirements contained in the proposed high-heat procedures are infeasible for many of our employees" and urges the Board to delete the high-heat requirements included in the proposed heat illness regulation.

Response #5: Please see the response to comment #CG4.

Comment #LP6: The commenter objects to the amendments to subsection (f)(1), more specifically to the requirement that a designated person be available to ensure emergency procedures are followed including providing emergency responders clear precise directions to the work site. The commenter notes that they could only do this if they worked in teams. "Because many times our staff work in areas off public roads and someone in the office could not meet the level needed for providing directions to the work site" In addition, the commenter states "We feel this is not practical and is unneeded when our employees are driving in vehicles with air conditioning. Our staff were unable to identify anywhere in the standard that a running vehicle's A/C could not meet the shade requirement and are confused by the statement that mobile crews require erecting shade."

Response #6: The Board believes that the responsible employer has established procedures for monitoring the general safety of remotely operating employees when hazardous conditions exist such as high wind or heavy rain, and that elevated heat is another weather condition that requires contingency planning involving preplanned routes and periodic communications with supervisory or dispatching units and follow up if a problem is detected. Please also see the responses to comments #CG3, #CG6 and #DH1.

Comment #LP7: The commenter notes that is their understanding that "there have been no occupational heat illness fatalities recorded in 2009 and the majority of the heat illness hospitalizations in prior years have occurred in the agricultural industry." The commenter adds "We don't believe that these proposed regulations are applicable to our industry…" and recommends to the Board that "either the current proposal be withdrawn, or that our proposed changes be incorporated into any future heat illness regulations."

Response #7: The Board concurs that imposing the high-heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Wendy Holt, Vice President, Production Affairs and Safety, Contract Services Administration Trust Fund (CSATF) and the Alliance of Motion Picture and Television Producers (AMPTP), by letter dated October 6, 2009

Comment #WH1: The AMPTP participated in the advisory process of five years to draft the current Heat Illness Prevention in Outdoor Places of Employment standard. During this process the issue of having temperature based triggers was considered, but the consensus at that time was to have the standard in effect at all temperatures. The motion picture and television industries have successfully followed the current standard and have not had any heat illness fatalities or non-fatal heat illnesses identified in the record during the period of 2005-2008. The proposed changes to the standard will not improve safety for these industries and therefore are opposed by these industries. The Administrative Procedures Act (APA) requires substantial evidence demonstrating a regulation is necessary to protect the health and safety of workers, and this may limit the application of a rule to more than one industry. The record for this regulation has shown that other industries have not been as able to comply with the current standard as the AMPTP. In order to be consistent with the APA, changes to the standard need to be applied specifically to the industries identified as having issues meeting the requirements of the standard. Therefore, the AMPTP believes that the existing standard is sufficient for general industry and opposes any changes to existing GISO 3395.

Response #1: The Board is gratified to hear that the industries represented by the commenter have been successfully complying with the current standard. The Board notes that among the proposed changes, the application of subsection (e) has been modified and would not apply to these industries. However, the Board believes that the change for requiring shade at 85 degrees, that would apply, provides sufficient compliance

alternatives when there are feasibility and safety issues. Consequently, the Board declines to exclude these industries from all the proposed changes. Please see the responses to comments #JF1 and #DH1.

Jon Weiss, by written communication dated October 6, 2009

Comment #JW1: The commenter objects to the amendments of subsection (a) in regards to allowing the option to either integrate the measures into the employer's written injury and illness prevention program or maintain them in a separate document. "The written measures required should be maintained in a separate document (not within the IIPP)… A separate document will facilitate easy review by enforcement personnel."

Response #1: The Board notes that Injury and Illness Prevention Programs are sometimes modular in nature, as in the case of an employer engaged in divergent industries. The Board believes that there should be some flexibility for employers who are required to retain records that involve training for specific time periods. The Board also believes that the proposed amended language for subsection (f)(3) addresses the issue raised by this comment. See also the response to comment #JW5.

Comment #JW2: The commenter questions the amendments of subsection (b), more specifically, the definition of "Temperature." "There is no known sampling protocol for outdoor temperature and the idea that a single reading will be sufficient as inferred in the proposed regulation is not good." The commenter states that the definition should contain some sort of sampling protocol such as: "At least 3 temperature measurements must be taken at the site and the distance between each sampling location must be at least 100 feet apart."

Response #2: The Board recognizes that there are many recommended standards involving heat stress that rely on specific methodologies for assessing heat conditions. However, the Board believes that this standard should be based for now on an easily understood and measured condition because it is applied broadly and applies to many employers who would otherwise find the determination to be difficult. Although the standard provides no measurement protocol, the definition is simple enough to be easily reproducible by all affected parties.

Comment #JW3: The commenter objects to the amendments of subsection (d)(1) in regards to 85 degree trigger temperature and the requirement of providing shade for 25% of the employees on the shift. The commenter states that "the selection of the 85 degree trigger temperature is an arbitrary number not based on any independent scientific studies…" and goes on to say that "the particular thermometers enforcement personnel have been given will not stand-up to a challenge regarding dependability and accuracy thus making enforcement of this regulation impossible." "In fact, the department has gone out of its way to purchase inexpensive units over those that might meet this basic requirement." In regards to the concept of providing shade for 25% of the employees, the commenter notes that "this proposed regulation will make enforcement and compliance

very difficult," since "people come in different sizes and shapes." The commenter believes that an "inspector would have to select 25% of the employees in the field and have them sit down in an area and calculate how much space they take up…" The commenter suggests that the Board consider a different approach, "more in line of a designated shade area of "X" number of employees. For example: The amount of shade present shall be a minimum of a 10' x 10' area to accommodate 25% of the employees on the shift at any time."

Response #3: The Board recognizes that the selection of 85 degrees as the threshold for erecting shade structures is not based on a specific scientific study but rather upon the Division's experience and recognition that there has been a distinct increase in the number of heat related complaints when the ambient temperatures reach 85 degrees. With regard to thermometers, the Board notes that the proposed definition for temperature does not establish a level of accuracy for instrumentation and if an employer risks using a very inaccurate thermometer to assess the temperature, then an investigation based on the use of a standard thermometer corroborated with weather reports for the area in question should provide sufficient data to establish if the standard has been violated. The Board also believes that the provision of shade may have to be evaluated in terms of the locale and type of shading that is being provided and may also require observation of its use to determine its adequacy. For these reasons, the Board declines to make the recommended modifications.

Comment #JW4: The commenter questions the amendments of subsection (d)(2) in regards to the requirement to have shade available when the temperature does not exceed 85 degrees Fahrenheit. The commenter notes that he prefers the concept for all situations, "that employers have shade readily available on-site (at all times and regardless of temperature) and provide access to that shade upon request of an employee."

Response #4: The Board recognizes that the state's climate includes sporadic and difficult to forecast periods of unseasonably high temperatures. Employers are already required to be prepared to provide shade when it is reasonably anticipated that there will be elevated temperatures. However, the Board believes that requiring employers to have shade structures present when not needed imposes an undue burden on the employer and declines to make the recommended change.

Comment #JW5: The commenter objects to the amendments of subsection (f)(3) in regards to the employer's procedures that are required to be in writing. "It is unclear under (3) what is to be in writing. The vast majority of written procedures reviewed by this writer do not include specific procedures for each subsection"… The commenter suggest that the Board insert the word "written" in each place "where procedures are called out to make it clear that employers are to develop written procedures for each subsection" where required in Section 3395.

Response #5: The Board believes that the proposed amendment for subsection (f)(3) is sufficiently clear in that it requires the content required by subsections (f)(1)(B), (G), (H),

and (I) to be in writing and available for employees and Division representatives upon request.

Bill Taylor, CSP, Public Agency Safety Management Association (PASMA), by letter dated October 7, 2009

Comment #BT1: The commenter notes that they know of no heat illness fatalities in 2009, and prior to that the majority of heat related fatalities and hospitalizations have occurred in the agricultural industry. These incidents still occur despite access to shade, water, and training. Public agencies in PASMA have implemented effective control measures for the employees who work outdoors. Most public agency workers work in urban areas where there is ready access to emergency medical care if potential heat illness arises. It is unfair to impose additional requirements on industries who have an excellent safety record in this regard. The Cal/OSHA heat illness regulation should therefore be applied only to the agricultural industry, and should be moved to Title 8, Article 13 Agricultural Operations.

Response #1: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #BT2: The commenter reports that many of the member agencies are concerned over the proposed changes to subsection (c) Provision of Water which refers to the applicable requirements of section 3363, the section that applies to PASMA members. Section 3363 does not include a requirement that the water is to be “suitably cool” and this phrase is vague without mention of how to determine if the water meets the requirement or what criteria to apply. The commenter recommends retaining the definition of potable drinking water.

Response #2: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #BT3: The commenter reports that many PASMA employees work on mobile service crews that make numerous stops during the day, such as tree trimming crews which have 7-12 stops each day or street maintenance crews that have up to 30 stops per day. The commenter believes that the requirement to erect shade and remain up when it is 85 degrees or more would be extremely time consuming and difficult for these types of crews. Many of the vehicles that they use have air conditioning, and others are able to drive to shaded areas if needed. The proposed language would require the crews to erect a shade structure when the temperature exceeds 85 degrees, and offers no alternative means. The commenter believes that one possible cooling measure, cooling vests, cost from 100 to 500 dollars each, and these are not feasible for vehicle operators. The commenter recommends that the shade requirement is only to be applied to fixed work locations. Mobile work zones should be exempted as long as employees have been trained how to access shade and water at the mobile worksites.

Response #3: Please see the response to comment #DH1.

Comment #BT4: The commenter believes that the supervisory requirements in subsections (e)(2) and (e)(3) will be difficult to follow because many of the employees work alone in parks or perform meter reading and the requirement triggered by temperatures exceeding 95 degrees for observation and encouragement to drink water would be difficult to follow unless a supervisor drove to all locations to perform these duties during the whole shift. This would require hiring additional supervisory personnel during these periods of high heat to comply with the requirement. Consequently, the commenter recommends deleting subsection (e) High-heat procedures from the proposed changes to Section 3395.

Response to #4: Please see the response to comment #ET5 and #CG4.

Glenn Steiger, General Manager, City of Glendale Water and Power (GWP), by letter dated October 8, 2009

Comment #GS1: The commenter commends the Division for its efforts to ensure California worker safety and health. GWP places a great deal of importance on safety and providing training for heat illness prevention. Glendale is a large urban area that provides employees with ready access to air-conditioned environments, potable water, and shade whenever needed during hot weather. The proposed changes as written are impractical for utility service and operations employees in Glendale and elsewhere. There should be an exception to exclude such workers from the requirements of Section 3395. More stringent rules will not necessarily be better. The proposed changes are clearly intended to address agricultural worker safety. Better compliance in this industry may be needed.

Response #1: The Board concurs that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #GS2: Some of the proposed changes, such as the requirement to provide shade at all times while employees are present, are not applicable to the utility industry. This wording would require small mobile crews working on jobs requiring little time, such as turning valves or checking components, to spend significant amounts of time and effort creating shade at each stop. Also, meter readers, continuously moving through an area, have access to shaded areas along their routes, and have no better place to erect a shade structure.

Response #2: The Board agrees that the requirements for erecting shade may not be feasible for all work situations, please see the response to comments #DH1 and #JR3.

Comment #GS3: The commenter believes that in the proposed subsection 3395(c) the revision of the definition of the water to be provided as “fresh, clean and suitably cool” is

insufficiently clear because there is a high degree of variability in the phrase, "suitably cool." It would be clearer to retain the existing definition of potable water as it is.

Response #3: The Board concurs that the change does not necessarily clarify subsection (c) and withdraws the proposed change. Please see the response to comment #CC1.

Comment #GS4: The commenter believes that the proposed revisions to subsection (d)(3) are too permissive and prone to be abused by someone who is not having heat related issues but does not feel like working on a hot day.

Response #4: The Board does not agree with this assessment of the language in (d)(3) and refers to the responses to comments #JZ2, #JW3, and #JC1.

Anne Katten, et al, California Rural Legal Assistance Foundation, by letter dated October 9, 2009

Comment #AK1: The commenter appreciates the efforts of the Board to address the problem of heat related injuries among outdoor workers. The commenter believes that the proposed amendments are mostly improvements to the standard, but there are still fundamental flaws that are not remedied.

Response #1: The Board thanks Ms. Katten for her comments in support of the proposal and for participating in the Board's rulemaking process.

Comment #AK2: The commenter believes that, in agriculture, the requirements of the employer should be applied to any party that acts directly or indirectly in the interest of an employer in relation to an agricultural employee. This would include individuals, an individual grower, corporate grower, cooperative grower, harvesting association, hiring association, land management group, associations or cooperative agricultural enterprises, and parties who own, lease or manage land used for agriculture. The commenter believes this is needed because these parties may all impact the scheduling and other work conditions that affect the employees.

Response #2: The Board lacks authority to regulate any individual, grower, association or third party where no employer-employee relationship exists or where supervision and control of an employee was not exercised. Consequently, the Board does not believe that modification to the proposal is necessary as a result of this comment.

Comment #AK3: The commenter believes that a new definition should be introduced into the standard to designate the climatic condition where the daily maximum temperature is more than 85 degrees F, and has increased 9 or more degrees above the high temperature of the previous day lasting until the day that the high temperature drops 9 degrees from the high of the previous day, or after fourteen days, whichever occurs first. The condition would also be established for an area if the National Weather Service forecasts a heat

wave, issues a Heat Advisory, or an Excessive Heat Warning, or if a NWA Heat/Health Warning is in effect.

Response #3: The Board acknowledges that the Heat Illness Studies revealed that sudden changes in the ambient temperature are an important risk factor of heat illness. However, incorporating a requirement that employers track whether or not the high temperature drops 9 degrees from the high of the previous day, or after fourteen days, would impose requirements that would be difficult for an employer to follow. Therefore, the Board declines to make the suggested amendment.

Comment #AK4: The commenter believes that a new definition should be added to the standard for "Scheduled meals and rest periods" that would make these terms conform to the meanings in the California Labor Code and the Industrial Welfare Commission Wage Orders.

Response #4: The Board declines to make the suggested change as it adds little to the standard; if the Industrial Welfare Commission specifies meals and rest periods, acknowledging that fact in Title 8 neither establishes nor alters that fact.

Comment #AK5: The commenter believes that the proposed changes to subsection (c) are helpful, but there also needs to be language that requires that the water must not only be potable, but must not have an offensive odor or taste. The commenter reports that many farmworker crews have complained to them about water which has an offensive taste or odor, and this prevents them from drinking the amounts of water needed to prevent heat illness.

Response #5: The Board acknowledges that the 2006 Cal/OSHA Heat Illness Case Study showed that although 90% of the worksites had drinking water at the site, 96% of the employees suffering form heat illness were dehydrated. The standard requires not only that water be provided, but that employers encourage employees to drink it frequently. If barriers such as offensive odor or taste are present, employees will be not be encouraged to frequently drink water, and the employer will not be in compliance with the requirements of subsection (c). Therefore, the Board does not believe that further modification to the proposal is necessary.

Comment #AK6: The commenter believes that based on experience, subsection (d) needs to be strengthened by clarifying the language to state that shade needs to be put up as a preventive measure instead of a remedial measure in response to a worker reporting illness. The lack of clarity also suggests to employers that heat illness can be rectified by a five minute rest in shade, and employees can go back to work.

Response #6: The Board believes that the proposed requirement to erect shade at 85 degrees strengthens subsection (d) and serves as a preventive measure in an appropriate manner. The Board also believes that training given to employees and supervisors, if

factual, should inform the workforce that five minutes is a minimum time rather than a panacea for heat illness. Therefore, the Board declines to modify that part of the proposal.

Comment #AK7: The commenter believes that the 85 degree threshold in subsection (d)(1) for providing shade is not protective enough. Analyses by the Division and the Department of Public Health show that heat illness occurred at temperatures as low as 75 degrees in 2005. Also, the Heat Index used by the National Weather Service designates 80 degrees as the threshold for less severe heat illness in sensitive individuals, but full sun can increase the index by 15 degrees which means that a temperature of 75 degrees could generate a Heat Index of 90 which is their threshold for Extreme Caution. The current standard does not take radiant energy into account for setting a safe temperature.

Response #7: The Board notes that many indices for assessing heat loads have been reviewed and proposed in the course of developing Section 3395. Please also see the response to comment #JW2.

Comment #AK8: The commenter believes that the quantity of shade required by subsection (d)(1) needs to be increased from the proposed level of 25% of the crew to enough shade for all the employees on a rest period to be able to take the break in the shade. The employer could meet this by staggering breaks or meal periods. The current proposal can be interpreted to mean that the shaded rest can be limited to five minutes at a time. Employees can only benefit from the shade if the access is not restricted in that manner.

Response #8: The Board notes that the amount of shade provided would vary according to however many employees would be on a break at the same time. In essence, this would mean that an employer would have to provide enough shade for as many as all the employees at the site if the employees all are required to take breaks at the same time.

Comment #AK9: The commenter believes that the language for providing shade in subsection (d)(1) must specify that the shaded area must allow employees to avoid contact with the bare soil which may itself be warm enough to negate the shade effect, and may also be contaminated with pesticide residues or unsanitary contaminants. The commenter also believes that the shaded area must be at least 20 feet from the nearest non-plumbed toilet facility to minimize odor and hygiene issues.

Response #9: The Board believes that the proposed amendment to the definition for shade precludes exposing employees to unsafe or unhealthy conditions addresses the main concerns raised by the comment. The Board notes that it is unclear how the distance of 20 feet was derived as the appropriate distance from unplumbed toilets, and declines to make the modification recommended.

Comment #AK10: The commenter supports the language in (d)(3) that allows access to a shaded area at all times since this clarifies for employers that the rest periods are intended to be a preventive measure but believes that the 5 minute minimum time is too short a

time to cool down. The commenter disagrees with the statement in the Initial Statement of Reasons which says that the five minute period would be adequate for preventing illness. The commenter notes that the ACGIH Threshold Limit Value for Heat Stress cool down time is 15 minutes and the U.S. Navy Marine Corps Heat Injury Prevention Program specifies 10 minutes. Consequently, the commenter proposes requiring a minimum time of 10 minutes.

Response #10: The Board notes that the standard does not prohibit an employee from taking a cool-down rest period longer than 5 minutes if that is needed or to take several such periods of 5 minutes or longer if that is the more appropriate response to prevent heat illness. In addition to this requirement, employers need to be cognizant of the fact that even if they provide the required 5-minute cool-down period when requested, other applicable standards for first aid and emergency medical response may additionally require adequate, appropriate, and reasonable response to possible symptoms of heat illness observed directly by the employer, or credibly reported by the employee or another individual observing the employee.

Comment #AK11: The commenter believes that workers rarely or never utilize the voluntary rest provision. It is not possible for workers to know when the cooling down is needed to prevent heat illness. Also, employees concerned about their job security or pay based on piece rate or quota systems will not want to take the rest breaks. Consequently, the commenter proposes new requirements as subsection (d)(5) and (d)(6). Subsection (d)(5) would require the employer to compensate the employees working on a piece rate basis for the rest periods, including the cool down rest periods with pay based on the average piece rate wage. Subsection (d)(6) would require the employer to ensure that employees actually take the designated rest breaks, and do not have any work duties during that time.

Response #11: The concept of piece rate is not unique to this standard. Other Title 8 standards allow employees to take breaks for a variety of reasons, from using the toilet to obtaining protective equipment; no similar requirements are imposed regarding those breaks, and there is no indication that the need for such requirements exists with respect to those breaks. Therefore, the Board does not see a need to specify compensation or otherwise address piece rate or other working conditions in this proposal.

Comment #AK12: The commenter believes that the trigger temperature for the High-Heat Procedures in subsection (e) of 95 degrees is too high because it discourages employers from taking the measures that are specified in the subsection which should be done as preventive measures. The commenter also believes that the temperature of 95 degrees is too high a threshold and proposes 85 degrees instead. The commenter proposes eliminating the clause “to the extent practicable” because it is vague and makes the subsection unenforceable.

Response #12: The Board notes that many stakeholders believe that subsection (e) imposes very onerous requirements, but accept that temperatures of 95 degrees and above

greatly increase the likelihood that heat illness will occur and should trigger increased precautions. The proposed revisions would require that shade is erected at 85 degrees, which is an increased protection. The Board also believes that the clause "to the extent practicable" allows for exigent circumstances which can occur and declines to make the recommended modification.

Comment #AK13: The commenter believes that subsection (e)(3) should require the employer to encourage an employee to drink water as well as reminding the person to drink.

Response #13: The Board believes that this is already required by subsection (c).

Comment #AK14: The commenter believes that the acclimatization exception to high heat requirements in subsection (e)(4) needs to be changed because acclimatization is rapidly lost. The commenter proposes changing the exception to doing similar outdoor work in similar heat conditions for at least 4 days, for 4 hours or more each day, during the 10 days immediately preceding the high heat work period that the worker will start.

Response #14: The Board acknowledges that an individual loses acclimatization over time. However, the exception would seem to be greatly limited by the suggested conditions. Consequently, the Board declines to make the recommended change.

Comment #AK15: The commenter believes that the high heat procedures need to include mandatory rest breaks of at least 10 minutes each hour. These breaks would be paid and could include scheduled meal and rest periods. The employer is also required to assess environmental conditions and work intensity to determine if longer rest periods are necessary.

Response #15: The Board believes that the present proposal contains adequate rest period provisions and that the commenter's suggestion would be difficult to implement and enforce. Therefore, the Board declines to make the change.

Comment #AK16: The commenter believes that the Heat Wave procedures should include the suspension of non-essential work production incentives between 12 noon and sunset. The commenter notes that during 2005, 2006, and 2008, heat illnesses were clustered during heat waves when the day temperatures increased dramatically and the night temperatures did not drop below 80 degrees. The commenter believes that responsible employers work early and defer non-essential work during heat waves already.

Response #16: The Board notes that the recommended modification is based on a condition (heat wave) that is not defined within Section 3395, is difficult to define and would be difficult to implement or enforce, for that reason. The Board declines to make the recommended modification.

Comment #AK17: The commenter proposes adding a requirement for the employer to develop a comprehensive written program for heat illness prevention. The commenter believes that the current regulation must have this requirement in order adequately to address heat illness prevention. The proposed requirement establishes specific aspects of heat illness that must be included.

Response #17: Please see the responses to comments #JW1 and #JW5.

Comment #AK18: The commenter proposes adding to the written program a specific requirement for providing first aid and emergency medical care in a timely manner. The commenter believes that delays in proper first aid and medical care can be life threatening, and the standard currently does not adequately address the problem.

Response #18: First aid procedures are more specifically addressed by Section 3400 and the other first aid standards referenced in subsection (a). The proposed standard includes training requirements intended to ensure that symptoms of heat illness are recognized by employees and reported to supervisors well before they progress to serious heat illness. The proposed training standards also contain requirements to help assure that emergency medical services are obtained rapidly in response to symptoms of heat illness. The Board believes that these requirements address the concern of the commenter to the extent possible. Therefore, the Board does not believe that further modification to the proposal is necessary as a result of this comment.

Comment #AK19: The commenter proposes moving the training subsection (f) to become subsection (h). The commenter believes that the regulation would be improved by requiring training for new hires and supervisors to be done prior to the commencement of work, and concurs with the other amendments that are proposed for the existing subsection (f).

Response #19: The Board notes that it has declined to adopt the new subsections (f) and (g) recommended by the commenter so that subsection (f) will still be training requirements. Also, the timing of the training required has been modified as explained in the response to comment #JR5.

Michael Smith, Attorney, Worksafe, by letter dated October 9, 2009

Comment #MS1: The commenter believes that the definition of “shade” should provide more guidance as to what constitutes unsafe or unhealthy conditions. The commenter recommends one sentence that would partially help this problem: “There is a rebuttable presumption that vines are not a safe and healthy source of shade.”

Response #1: This definition of “shade” pertains to many possible circumstances and a broad range of industries. The Board, therefore, believes that a broad and inclusive definition is appropriate. Accordingly, the Board declines to make the proposed change.

Comment #MS2: The commenter believes that the definition for "Temperature" should not be based on the dry bulb measurement because that methodology does not take into account humidity or radiant heat which are both felt by those working in the heat. These criteria are used by the American Conference of Governmental Industrial Hygienists and the United States Army for heat evaluations and should be adopted into the standard.

Response #2: The Board recognizes that there are certain limitations in relying upon simple definitions for this section. However the Board believes that adopting the recommended definitions would impose the use of instrumentation and require expertise that would be beyond the means of most employers, and therefore, the Board declines to adopt the recommended change. Please also see the response to #JC1.

Comment #MS3: The commenter supports the revised language to subsection (c) Provision of Water since the changes are consistent with the field sanitation regulations that already exist for agriculture and thus will not impose additional burdens on those employers. The changes will also improve the quality and quantity of water provided to workers exposed to heat. However, the commenter believes that there should be language to require that the provided water not have a foul smell or taste since these problems could make workers sick or cause them to drink less water than needed to prevent heat illness.

Response #3: Please see the response to comments #CC1 and #AK5.

Comment #MS4: The commenter believes that the multifaceted approach used in subsection (d) to establish different levels of required employer action to protect against heat illness as the heat burden rises is generally sound, but also believes that there problems within each subsection of (d). The commenter believes that for subsection (d)(1), the trigger of 85 degrees is too high, and shade should be required at a lower temperature. This is based on the Cal/OSHA Investigations of Heat Related Illness dated February 17, 2006, which documents heat illness occurring at temperatures as low as 75 degrees. The commenter recommends adopting a trigger temperature of 75 degrees which would be more protective than reactive for heat illness.

Response #4: Please see the response to comment #JZ4.

Comment #MS5: The commenter believes that provision of shade requirement in subsection (d)(1) which sets a minimum shade coverage for 25% of the employees on the shift at any time will not adequately protect employees when it is most needed, on the hottest days of the year, and at the hottest times, when many employees may need shade at the same time. The commenter notes that if the proposed wording had the intent of reducing the financial burden for some employers, that many employers have felt a moral obligation to provide enough shade for all the employees on shift, and creating this threshold will give employers who minimize this protection an unfair competitive advantage over the more responsible. Financial burdens do not lead to exceptions for safety devices such as seat belts, hardhats, etc., or an excuse for failing to protect

potential victims. Therefore the commenter recommends requiring enough shade for all employees on shift.

Response #5: The Board believes that the threshold of 25% of the employees on the shift establishes a threshold that is more easily achieved than would be a requirement to have shade for all. This provision is intended to address not only financial burdens but also the feasibility of finding space enough for the needed shade since this applies not only to agricultural situations but urban and highway settings as well. On this basis the Board declines to make the recommended modification.

Comment #MS6: The commenter believes that the process for providing shade when the temperature is below 85 degrees has an inherent weakness by relying on employees to initiate the provision of shade by making the request to the employer. The flaw is that employees who are most likely to be working in harsh heat conditions have little bargaining power and will be reluctant to make any demands on an employer. The commenter believes that this employee protection needs to be mandatory and cites Bernhardt et al., in Broken Laws, Unprotected Workers (2009) as supporting information.

Response #6: The Board is cognizant of the issue raised by the comment, but believes that the great majority of heat illness cases will be addressed by requiring shade to be provided at 85 degrees.

Comment #MS7: The commenter believes that although it is good to encourage employees to take a cool-down rest and supports the underlying basis for it, the wording of subsection (d)(3) places the burden on the employee to take this action even though the employee cannot be expected to know when the break is really needed, or may be very reluctant to stop working when the work is based on piece-rate or quota systems, or to make demands of the employer. The requirement should be changed to provide mandatory breaks which may be as often as hourly, when the temperature reaches specific levels. This approach is recommended by the American Conference of Governmental Industrial Hygienists and the U.S. Military. The commenter provides the example that the US Army has a policy for a 20 minute rest break every hour during hard work when the wet bulb globe temperature is 78 degrees or above, with more rest as the temperature rises. The commenter also believes that the break in this subsection is also insufficient to actually cool a worker's core body temperature, and the break should be at least ten minutes.

Response #7: Please see the response to comment #AK15.

Comment #MS8: The commenter strongly supports a tiered system for increasing the measures required of employers as the temperature increases, but believes that the subsection (e) High-heat procedures should be triggered at a much lower temperature than the 95 degrees that is currently proposed. This trigger does not recognize the stress that is placed on the human body at that temperature. The trigger should be at 85 degrees to be more preventive of heat illness by taking into account the combined effect of the

heat, work load, sun and humidity on the body. The proposed change would not impose an unreasonable burden on the employer, but would require more supervisor attention to the conditions.

Response #8: Please see the response to comment #AK12.

Comment #MS9: The commenter supports the provisions in subsection (e)(1), (e)(2), and (e)(3). Effective communication, observation of employees, and hydration are important to protect workers in high heat.

Response #9: The Board thanks the commenter for supporting and participating in this rulemaking process.

Comment #MS10: The commenter strongly supports the concept in subsection (e)(4) of close supervision and observation of new employees who are the most at-risk group. This is shown by the heat illness cases included in the 2006 memorandum that showed eighty percent of the cases involved workers who had been on the job for four days or less. However, the commenter believes that the close supervision requirement should be modified to except only new employees who worked fewer than eight shifts of at least four hours in the previous two weeks instead of the employees who state they have worked ten or more of the past 30 days, which the commenter believes would be more confusing. The commenter also believes that his proposed language would better reflect the importance of a worker having more recently conducted similar outdoor work which is a factor in heat illness risk.

Response #10: The Board notes that several comments have been made to recommend alternatives to the proposed amendment. The proposed amendment attempts to apply the concept that some new employees who have been more acclimated to working in elevated heat conditions would not need close supervision. The Board believes that the modifications suggested in comments do not provide a clear advantage over the proposed language and also declines to utilize the language recommended here. Please also see the responses to comments #JF2 and #AK14.

Comment #MS11: The commenter believes that mandatory breaks are needed as a high-heat procedure. As in a previous comment, the commenter notes that the US Army has a policy for a 20 minute rest break every hour during hard work when the wet bulb globe temperature is 78 degrees or above, with more rest as the temperature rises. The Board should adopt a similar requirement in order to fulfill its mandate to protect workers. The commenter believes that ten-minute mandatory breaks under high heat conditions of 85 degrees and above would protect the most vulnerable workers more effectively than the proposed revisions. Paid breaks would also not penalize the hourly and piece-rate workers for taking cooling periods.

Response #11: The Board believes that the proposal in its present form contains reasonable, enforceable provisions regarding breaks and declines to make the suggested

change. There is no basis for concluding that all work should be done organized in accordance with military procedures.

Comment #MS12: The commenter supports the amended changes to subsection (f) Training. The commenter believes that training new employees is appropriate as they may not be acclimatized. Also, training for new supervisors helps ensure that the employer can meet their responsibilities under the standard. This proposal reflects the Division's investigations showing that the lack of supervisor training has been an important contributing factor in heat illness cases.

Response #12: The Board thanks the commenter for supporting and participating in this rulemaking.

Comment #MS13: The commenter supports the addition to subsection (f)(1)(I) to require the designation of a person responsible for invoking emergency procedures, but believes that it should also require employers to provide immediate medical care and transportation to medical facilities in an emergency if necessary.

Response #13: The Board notes that the training content required in subsection (l) includes responding to heat illness symptoms, providing emergency medical services and having procedures for transporting employees. Also, existing regulations such as Sections 3400 and 3439 already require employers to have preparations in advance to provide prompt medical attention either by onsite facilities or by providing transport to medical facilities. Since the existing regulations establish the desired requirement, the recommended change is not necessary.

Marti Fisher, Policy Advocate, Labor & Employment and Health Care Policy, California Chamber of Commerce Coalition, by e-mail dated October 9, 2009

Comment #MF1: The commenter shares the Board's commitment to ensuring the health and safety of outdoor workers but believe that the creation of new, prescriptive requirements will not have the effect of achieving increased compliance by employers who are already complying with the existing regulation. More effective enforcement would provide more protection.

Response #1: Please see the response to comment #JF2.

Comment #MF2: The commenter cautions the Board that an employer's strict compliance with a regulation is no guarantee that an employee will never suffer from heat illness.

Response #2: The Board is cognizant of this possibility.

Comment #MF3: The commenter believes that a reasonable revision to the standard can be developed with consensus by further clarification and revisions to the current

proposal, but the commenter opposes the proposed changes to Section 3395. The commenter proposes amendments to the proposed revision that would remove her opposition.

Response #3: The Board thanks the commenter for participating in the November advisory committee meeting convened by the Division and proposing modifications of the proposal.

Comment #MF4: The commenter supports the removal of the term "Preventive Recovery Period" and its definition from subsection (b), and the accompanying change to subsection (d)(3) on access to shade. The existing definition creates confusion about the concepts of heat illness prevention and recovery; an individual suffering from heat illness needs to be treated for the illness rather than to be given a break. A cool-down break period is appropriate for employees who feel the need to prevent heat illness.

Response #4: The Board thanks the commenter for supporting this amendment.

Comment #MF5: The commenter supports the amended definition of shade which clarifies that any natural or artificial means that does not expose employees to unsafe or unhealthy conditions is acceptable. Some stakeholders are concerned that some natural shade could pose certain hazards, but natural shade may be preferable to employees and cannot be ruled out.

Response #5: The Board has generally concurred. Please see the response to comment #MS1.

Comment #MF6: The commenter has concerns with the language in subsection (c) for the provision of water. The commenter believes that the phrase "ready access" is unclear if it means that the water is within a reasonable proximity or if it means the employee will have the water in their hand at all times. The commenter notes that the Division's Heat Illness Prevention Enforcement Q&A of March 17, 2009, has clear language about water which is to be: "placed in locations readily accessible to all employees." The commenter believes that this issue needs to be clarified in the regulation. The commenter is also concerned about the phrase "fresh and pure" since it is not defined, and the requirement for potable water adequately covers the requirements that would be set by health authorities.

Response #6: The Board concurs that the proposed language does not necessarily clarify subsection (c) and withdraws the proposed changes. Please see the response to comment #CC1.

Comment #MF7: The commenter opposes the 85 degree trigger for the presence of shade in subsection (d) unless the requirement also has an exception for situations where providing a shade structure is unsafe or infeasible.

The commenter believes that the proposed regulation does not acknowledge the reality of outdoor workplaces where the continuous presence of a shade structure is not always safe or feasible, and the commenter provides some examples such as mobile crews relocating continuously throughout the workshift, road or bridge construction that has no available space for a shade structure; construction sites where the work is being done on all available space; and construction sites where all the free space is used for egress and ingress. The commenter would support a trigger temperature if an exception addressing these types of situations was included, but the commenter will not support a temperature below 85 degrees.

Response #7: The Board agrees that the requirements for erecting shade may not be safe or feasible for all work situations; please see the response to comments #DH1 and #JR3.

Comment #MF8: The commenter is concerned that the two tier approach in subsection (e) for high heat procedures adds to the liability and burdens for employers. The requirement in subsection (e)(1) would assume that a supervisor has medical expertise sufficient to determine when an employee shows signs and symptoms of heat illness. It is not reasonable to expect supervisors to be able to tell if an employee is not alert. It is not clear how this requirement would be enforced if there is an instance where this is not observed. The commenter also believes that it is not clear how to comply with the requirement for the employer to remind employees throughout the shift to drink plenty of water, in subsection (e)(2). The commenter believes that a single approach would not adequately address varied workplace situations.

Response #8: Please see the response to comment #CG4.

Comment #MF9: The commenter opposes the language in subsection (f)(1) requiring that all employees and supervisors to be trained in the content of the subsection before beginning the outdoor work subject to this regulation. The commenter believes that this is redundant with the requirements of Section 3203, and subjects the employer to vulnerability to two violations for the same situation. The commenter believes that section 3203(7) already applies to this situation and proposes alternative language.

Response #9: Please see the response to #JR5.

Carl Borden, Associate Counsel, California Farm Bureau Federation, et al., by e-mail dated October 9, 2009

Comment #CB1: The sixteen agricultural employer groups support the proposed revisions to Section 3395 and believe that they are reasonable and consistent with their request for clarifications to this standard. They appreciate the opportunity to comment on them.

Response #1: The Board thanks the commenter for supporting and participating in this rulemaking process.

Comment #CB2: The agricultural employer groups have one issue regarding subsection (d)(1) and situations where shade cannot be provided as would be required, and an alternative means of compliance should be added to the proposal for these situations. These situations involve employees who are operating vehicles that cannot be fitted with shade structures, such as all-terrain vehicles, or are on horseback, as well as employees operating moving equipment in remote locations.

Response #2: The Board agrees that the requirements for erecting shade may not be safe or feasible for all work situations; please see the response to comments #DH1 and #JR3.

Bruce Wick, Director of Risk Management, California Professional Association of Specialty Contractors (CALPASC), by letter dated October 12, 2009

Comment #BW1: The commenter believes that the current standard provides appropriate protections for employees. CALPASC would prefer that the efforts to improve heat illness prevention focus on enforcement in industries where compliance with the regulation continues to be a problem.

Response #1: Please see the response to comment #JF2.

Comment #BW2: CALPASC would oppose the proposed changes to Section 3395 unless they are amended to include the exceptions for activities and operations where shade being up at all times, when the temperature is 85 degrees or higher, is not feasible, that were proposed by the coalition led by the California Chamber of Commerce. CALPASC would support the proposed amendments to Section 3395 with these exceptions.

Response #2: The Board agrees that the requirements for erecting shade may not be feasible for all work situations; please see the response to comments #DH1 and #JR3.

Jon Parry, General Manager, Bemus Landscape, Inc, by e-mail dated October 13, 2009

Comment #JP1: The commenter has operations throughout Southern California and strongly opposes the proposed heat illness revisions to Section 3395 of the Title 8 Safety Orders. Having been in business for over thirty (30) years the amount of changing regulations to have to deal with is astounding. The existing regulations are adequate and the proposed revisions simply complicate matters unnecessarily. We strongly support the position taken by CALPASC in its letter dated October 12, 2009.

Response #1: The Board thanks the commenter for their comment. See the response to Mr. Wick's written comment.

Dana Lahargoue, Chair, CEA Safety Committee, California Employers' Association (CEA), by letter dated October 12, 2009

Comment #DL1: The commenter believes that some of the high-heat procedures need to be clarified, with regard to the requirements for assessing signs or symptoms of heat illness in subsections (e)(2) and (e)(4) for current and new employees. The commenter notes that no qualifications are stated for the person responsible for observing employees for symptoms of heat illness. Also, it is not clear if the requirement for close supervision of the new employee means that there should be equal or greater observation for symptoms, or more frequent direct oversight of activities, or both.

Response #1: Please see the response to comments #MS8 and #ET4.

Comment #DL2: The commenter recommends clarifying subsection (f)(1)(C) to clearly state that the term "cups" refers to the standard unit of measurement by defining the stated "4 cups" to mean one quart. This change would preclude the regulated community from making inferences or assumptions.

Response #2: The Board notes that the actual volume of water that is required is specified in subsection (c) and subsection (f)(1)(C) refers to the practical approach to achieving that specified volume. For this reason, the Board declines to make the recommended change.

Alicia Gonzalez Flores, MSIV, UCSF School of Medicine, by letter dated October 14, 2009

Comment #AG1: The definition of acclimatization should include the concept that workers lose their acclimatization when the heat ceases for a period of 3-4 weeks.

Response #1: The Board thanks the commenter for the suggested change; however, the focus of compliance has been on the issue of preparing the workforce for the onset of elevated heat.

Comment #AG2: The definition of personal risk factors should also include body build. Scientific references have demonstrated that persons with higher body mass index or obesity are more susceptible. A 1999 survey of California farm workers found a large number to be obese and at higher risk for heat stroke.

Response #2: The Board believes that the risk factors identified by the commenter are indeed significant factors in an individual's susceptibility to heat illness. However, incorporating a requirement for an employer to evaluate personal risk factors would impose requirements that would be extremely difficult for an employer to follow and might violate protections for the personal privacy of the employee. Therefore the Board declines to make the suggested amendment.

Comment #AG3: Regarding subsection (c) provision of water, the military heat stress control procedures include a drinking schedule and cooling water to 50-60 degrees. Thirst

lags behind hydration so in addition to encouraging workers to drink water frequently, employers should establish scheduled water breaks.

Response #3: Please see the response to comment #AK15.

Comment #AG4: The military guidelines mandate a work/rest period of 50/10 minutes for wet bulb temperatures of 82-85 degrees. These rest periods should be paid time and piece work should be replaced by hourly work for high heat conditions.

Response #4: Although the Board is cognizant of the research and experience that have resulted in the military guidelines for preventing heat illness, the Board believes that the average employer affected by the proposed standard lacks the resources to implement the process that the military uses. The Board is also aware that the pay relationship in many establishments would tend to discourage an employee from taking breaks, even when the employee feels the effects of heat illness. However, the Board lacks the authority to impose broad and fundamental changes in wage and hour relationships between employers and employees.

Comment #AG5: Regarding subsection (e) high heat procedures the 95 degree trigger should be changed to 85 degrees since some previous cases of heat illness occurred as low as 75 degrees.

Response #5: Please see the response to comment #AK12.

Comment #AG6: The close supervision of new workers should be revised to limit the number of hours for new non-acclimatized worker to 4 hours the first day gradually increasing to full shift over two weeks. The army guidelines limit exposure to two hours per day with gradual increases per day.

Response #6: The Board is concerned that employers will find the process of acclimating new hires difficult to implement and make them reluctant to hire prospective employees who are not acclimatized to heat or cannot establish that they are actually acclimatized. On this basis, the Board declines to make the recommended change.

Comment #AG7: The statement about doing similar work for 10 of the past 30 days lacks specificity. Those 10 days could be continuous or intermittent. Also 20 days since working those 10 days would lose acclimatization. The commenter recommends close supervision and similar weather conditions at least 12 consecutive days and at least 4 hours worked per day in the last 21 days.

Response #7: Please see the response to comment #MS10.

Comment #AG8: The proposal lacks specific requirements for providing immediate first aid. On-site treatment including cooling of the victim should begin immediately in the

field while awaiting medical responders. The following military guidelines should be added to the proposal:

1. Lie the victim down in the shade without contacting warm soil and elevate legs.
2. Undress victim as much as possible
3. Pour cool water or use wet sheets over victim and fan.
4. Cool by water immersion or ice if available
5. Give sips of cool water if victim is conscious.

Response #8: Please see the response to comment #AK18.

Guadalupe Sandoval, Managing Director, California Farm Labor Contractor Association, by letter dated October 15, 2009

Comment #GS1: The members of the Association generally support the proposed revisions to Section 3395 and believe they are reasonable for the most part. They also appreciate the opportunity to comment specifically.

Response #1: The Board thanks the Association for their participation in this rulemaking effort.

Comment #GS2: The Association has one issue regarding subsection (d)(1) and situations where shade cannot be provided as would be required, and an alternative means of compliance should be added to the proposal for these situations. These situations involve employees who are operating vehicles that cannot be fitted with shade structures, such as all-terrain vehicles, or are on horseback, as well as employees operating moving equipment in remote locations. To deal with these situations, the Association endorses the exception proposed by the California Chamber of Commerce for (d)(1).

Response #2: The Board agrees that the requirements for erecting shade may not be feasible for all work situations; please see the responses to comments #DH1 and #JR3.

Lauren Ornelas, Founder/Executive Director, Food Empowerment Project, by letter dated October 15, 2009

Comment #LO1: To be sure there is no confusion in the field the definition of shade should include a line stating that “vines should not be considered shade.”

Response #1: Please see the response to comment #MS1.

Comment #LO2: The commenter supports the changes to subsection (c), provision of water. The changes will be consistent with the field sanitation regulations and will not impose an additional burden on agricultural employers. The change will improve the quality and quantity of water provided for all outdoor workers in the heat. There should be an additional provision that the water will not have a foul smell or taste. The goal

should be to ensure workers are protected by being able to drink water as needed to avoid heat illness.

Response #2: The Board has determined that the proposed changes to the language in subsection (c) do not provide more clarity and should not be necessary to assure that the needed amounts and quality of the water is provided to employees. Since the subsection refers to the existing standards that apply to various types of operations, those subsections already apply and can be used for enforcement purposes by the Division. Please see the response to comment #CC1.

Mario Martinez, General Counsel, United Farm Workers of America, by letter dated October 15, 2009

Comment #MM1: The commenter supports the comments submitted by the California Legal Rural Assistance.

Response #1: See the response to CRLA written and oral comments.

Comment #MM2: Any revisions to Section 3395 are ineffective without allowing a majority of farm workers to choose a representative union by election or a majority sign up process. Cesar Chavez always said that government could only give farm workers the laws but it is up to the workers to enforce those laws and protect themselves through self-help collective action. The commenter opposes any revisions to Section 3395 that do not include the farm workers' ability to enforce the regulations.

Response #2: The Board notes that the authority to require union representation exceeds the authority of this Board under the law.

Matt Rodriguez, Chief Assistant Attorney General, California Office of the Attorney General, by letter dated October 15, 2009

Comment #MR1: The proposal fails to adequately assure safe working conditions during extremely hot weather. The proposal places the burden on workers to ask for water, shade, and breaks, rather than being provided as needed by the employer. The common use of piece rate in agriculture intensifies the burden on workers by creating incentives for workers to skip necessary water and breaks. Without a clear mandate for employers to provide water, shade and breaks, mere guidance to workers to drink water, seek shade and take breaks has proved inadequate. To strengthen the regulation the Board should consider the military heat stress prevention program that includes the interrelationship of temperature, humidity, and exposure to direct sunlight.

Response #1: The Board believes that the absence of a clear and measurable threshold for the onset of heat illness except on an individual basis requires the standard to rely in part on the perception of employees that they are suffering the ill effects of heat. If coupled with training of both employees and their supervisors as to what needs to be done in

response to the onset of heat illness, the intent of the standard is to provide the employee with ready access to the standard's safeguards as needed.

Melinda Ahrens, Sierra West Construction, e-mail dated October 15, 2009

Comment #MA1: The commenter supports the position taken by CALPASC in its letter of October 12, 2009. Sierra West Construction, Inc. is a framing contractor and has been in business for 22 years and has 25 employees. The commenter does work in Northern California and soon in Southern California.

Response #1: The Board thanks the commenter for their comment. See the response to Mr. Wick's written comment.

Carla Gunnin, Constangy, Brooks & Smith, LLP, by e-mail dated October 15, 2009

Comment #CG1: Proposed Section 3395(d)(4) should be amended to clarify that employers not in the agricultural industry who have employees that work part of the time in air conditioned environments would meet the intent of alternative cooling measures. Alternatively, proposed Section 3395(d)(1) should be amended to clearly state that only those employers whose employees work outside during their entire shift must provide shade at all times while employees are present. In particular, employees whose entire work shift does not involve working outside, but who actually have work to perform inside an air conditioned building, should be exempted from coverage of the regulation. This would be accomplished by clarifying the meaning in proposed Section 3395(d)(4).

Response #1: The proposed modification to subsection (d)(4) has been made to allow for the use of alternative cooling measures if shade is infeasible; please see the response to comment #DH1. The Board does not agree that the shade requirement should apply only to employees who work outside during their entire shift as there would be many instances where employees might spend a very short time within an air conditioned building while having a sufficient exposure to heat outdoors to become ill. Please also see the response to comments #CC2 and #JR3.

Comment #CG2: Proposed Section 3395(d)(3) should not be amended to allow employees to take a cool-down rest at a time when they feel the need to do so to protect themselves from overheating. The language in the current regulation is sufficient, in that it permits employees to take breaks when needed as part of a preventative recovery period. The proposed language is vague in that there is no defined trigger of when an employee will feel the need to take a minimum five minute break. Further, employer's cannot "encourage" breaks based upon an employee's feelings. Only the employee can know if a preventative recovery period is needed. Preventative recovery period is defined whereas an employees' feeling the need to protect themselves from overheating is vague. The current regulation's training provisions require employers to educate the employees so that they are able to understand when a preventative recovery period is needed. Additionally, "heat illness" is defined in the regulation and tied to the definition of

preventative recovery period whereas "overheating" is not defined, adding to the vagueness of this proposed change.

Response #2: The Board notes that the comment itself presents the reason for basing the use of a preventive recovery period upon the employee's perception of need: "Only the employee can know if a preventive recovery period is needed." The breadth of requirements under this section establishes that employees need to have training which enables them to recognize the symptoms leading to heat illness, and similarly for supervisors to detect signs and symptoms of heat illness since the onset of illness often impairs an individual's ability to recognize that there is a problem. The Board also believes that the term "overheating" is sufficiently clear in the context of the requirement and declines to make modifications in response.

Comment #CG3: Proposed Section 3395(e)(1) should not be amended to state "an electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable." Employers can only rely upon technology that is currently feasible. If a cell phone service provider does not provide coverage for an area, then alternative measures such as the ability to use a land line should be permitted. In particular, if an employee is operating a vehicle and has the ability to stop to use a land line to place a call, then this should be considered adequate communication, if an electronic communication device is not in a service area.

Response #3: The Board notes that the language does not preclude the use of a landline since it is an electronic means of communication. However, this cannot be widely applied to the use of a vehicle or other means of transportation to attempt to find a landline, or to access a known landline that would require extensive time to access. Time limits that have been established for providing first aid under other regulations need to be considered if this procedure is to be followed.

Comment #CG4: Proposed Section 3395(e)(2) should be removed. This provision would require employers to have supervisors posted to observe employees during the entire shift, when the temperature is over 95 degrees, for signs and symptoms of heat illness. Again, adequate training should educate the employee about signs and symptoms of heat illness. Only the employee is aware of how he/she feels and only the employee can know that a preventative recovery period is needed. This provision would eliminate the ability of any employer to allow employees to work alone in outdoor environments when the temperature is over 95 degrees.

Response #4: The Board acknowledges that the process for an employee to access shade does rely upon the ability of the employee to recognize symptoms in themselves that can indicate the onset of heat illness. However, the Board also notes that the physiological process of responding to heat involves increased circulation of the blood to the skin surfaces, to transfer heat away from the body, which can result in decreased flow of blood and the oxygen it carries to the brain. If this process continues for a sufficient time, it can result in syncope (fainting) or generalized disorientation in the individual. Once

disoriented, the individual often fails to recognize that the symptoms of heat illness are occurring and at this point recognition by the trained supervisor is crucial for assuring that the person accesses shade and possibly medical treatment. In the instances where employees are required to work alone, the requirement can be met by enabling the supervisor to contact each employee periodically with an electronic communication device and assure that the solitary worker seems coherent and aware of working conditions. Also, in instances where employees work in small groups that do not have a supervisor present throughout the shift, the supervisor may designate an employee with sufficient experience and training to look for signs and symptoms of heat illness. It must also be reiterated that such a designated observer must know what to do if heat illness occurs. On this basis, the Board declines to remove the subsection as recommended by the commenter.

Comment #CG5: It is not clear what the purpose of adding the word "effective" to the second sentence in Section (f)(1) is. Effective training should be defined so that an employer understands how to comply.

Response #5: The Board notes that the concept of "effective" training should be familiar to California employers since it was introduced with the adoption of Section 3203 Injury and Illness Prevention Program, and employers may review that section if they need clarification as to what effective training entails.

Comment #CG6: Proposed Section 3395(f)(1)(I) stating "these procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate" is unclear. Would this provision mean that a supervisor would need to be present at all work locations to ensure that emergency procedures are invoked when appropriate? What does the term "available" mean as used in this proposed language?

Response #6: The intent of the proposed subsection is to assure that a supervisor or other designated person who is able to implement emergency procedures for accessing emergency responders is available whenever employees are at risk for heat illness. The designated person is not required to be a supervisor, but the designated person must be trained sufficiently and equipped as required under this section, to access emergency response services.

Ken Nishiyama Atha, Regional Administrator, Occupational Safety and Health Administration, U.S. Department of Labor, by letter dated October 16, 2009

Comment #KN1: This standard is at least as effective as Federal OSHA's policy on heat illness protection for employees in outdoor employment.

Response #1: The Board thanks Mr. Nishiyama-Atha for the OSHA assessment of the standard and proposed changes.

Elizabeth Treanor, Phylmar Regulatory Roundtable, comments dated October 15, 2009

Please see below for the comments as presented during the oral comment presentation.

Maria (Pilar) Gonzales, by letter dated October 15, 2009

Comment #1: Her husband, Gregorio Hernandez Rubio was a construction worker that died in 1994 from heat illness. He did not have access to shade, emergency communication with a supervisor, a trained person to observe him for symptoms and he did not have enough water to drink. The Board is encouraged to adopt the proposed provisions so construction workers are given the protections her husband did not have and no one else suffers his fate.

Response #1: The Board thanks the commenter for providing testimony supporting the need to apply the proposed regulation to construction work.

II. Oral Comments

Oral comments received at the October 15, 2009, Public Hearing in Oakland, California.

Terry Thedell, Health and Safety Advisor representing Sempra Energy

Comment #TT1: Sempra is supportive of enforcement of the existing Heat Illness standard for all applicable California employers as well, and it recognizes the special safety and health concerns of agricultural workers, but it concludes that the proposal is the third round of proposed emergency measures under consideration that would not reduce the frequency of heat illness, as it again does not address enforcement of the existing provisions of the current standard.

Furthermore, these proposed measures continue to confuse outdoor agricultural work with non-agricultural outdoor work and add an additional regulatory burden on employers with a good record of years of heat illness prevention. Sempra observes that agricultural operations are only a subset of all outdoor places of employment; yet the proposal under consideration treats heat illness requirement as if all outdoor employment was agricultural with minor exceptions of alternative cooling measures that are available to non-agricultural employers.

Response #1: The Board is aware, from the many comments during this rulemaking, that many employers still do not comply with the existing regulation, and the Division has not inspected all such employers. The Board does not believe that the Division has the resources to visit every employer affected by every new regulation. With regard to applying the proposed changes to only agricultural operations, please see the response to comments #JF1 and #JW1.

Comment #TT2: Sempra is unclear on what is considered practical versus feasible regarding observing employees for alertness and signs of heat illness. Sempra has a number of employees who work alone outdoors as meter readers, linemen, loaders, and biologists, and during periods of the day they are beyond direct observation of their supervisors. Finally, in the Initial Statement of Reasons, the Division has implied that all outdoor employers are experiencing an increase in heat related illness.

Response #2: The Board concurs that some work operations in the field make the proposal to have a supervisor closely observe an employee infeasible. Please see the response to comment #DH1.

Comment #TT3: Sempra is a California employer of hundreds of employees working outdoors in coastal, inland, and desert conditions in Southern California year after year with very few cases of heat-related illness and no upward trends. The most recent information from 2008 and the results of the first three quarters of this year still show very few cases. This year, Sempra has had only three heat-related instances. This indicates that while Sempra is not perfect, it has redoubled its efforts to keep its employees mindful of heat illness. Sempra is perfect, however, in never having a heat-related fatality in the millions of man-hours spent working outdoors over the years.

Response #3: The Board commends Sempra for improving its history with respect to heat related illness incidents. However, the Division has used heat illness incidence calculations to establish which industry sectors should be included within the new requirements that are being proposed. Based on their findings, utilities are included. Please see the response to comment #JF1.

Comment #TT4: Sempra supports enforcement of the existing heat illness standard, but it is trying to understand how the proposal increases compliance with the existing standard. Furthermore, Sempra understands and applies the provisions of the existing heat illness standard, but by adding more provisions to the standard, they become academic to the work culture and increase the regulatory compliance burden without improving the safety of employees. Sempra asks the Board not to confuse agricultural and non-agricultural outdoor work and adopt an appropriate regulatory response to heat illness for the overall California work extremes and not assumptions of an emergency for all non-agricultural employers. What is needed is more enforcement of what is already on the books.

Response #4: The Board notes that increased enforcement is always desirable, but that fact does not negate the anticipated benefits of the amended proposal, as set forth in these responses to comments and other rulemaking documents.

Marti Fisher, Policy Advocate representing the California Chamber of Commerce

Comment #MF1: The Chamber and a coalition of 19 organizations in California (the Coalition), stated that the Coalition shares the Division's commitment to maintaining and ensuring the safety of outdoor workers in clarifying the regulation. However, the

Coalition feels that more prescriptive and new regulations are not going to increase compliance among employers that are not complying with the existing regulation. The Coalition has diligently and thoughtfully reviewed the proposal, and at this time, it opposes the proposal in its entirety unless the Coalition's concerns are addressed.

Response #1: The Board concurs that an absence of enforcement activity would reduce compliance with the heat and other DOSH standards. However, the issue of Division resources is not within the authority of the Board.

Comment #MF2: The Coalition supports the deletion of the preventive recovery period, as the term is contradictory. One cannot prevent illness and recover from the illness at the same time. The Coalition supports the clarification of the shade requirement, but there are concerns with the proposed language regarding drinking water. There is no definition of "fresh and pure," and the difference between "fresh and pure" water and potable water is not clear.

Response #2: Please see the response to written comment #CC1.

Comment #MF3: There should be a provision that would exempt situations in which it is infeasible or unsafe to have shade up at all times and that would allow the erection of shade upon request. The Coalition is concerned about the ambiguity and the vagaries of the high heat provisions and requests an opportunity to work with the Division to clarify how those provisions are to be implemented and how employers would actually comply with those provisions.

Response #3: The Board concurs that there are some situations that make the raising of shade structures to be infeasible or even hazardous. In response to these concerns, the Division proposed amended language that is discussed in the response to comment #DH1. The Board also notes that the high heat provisions were discussed at the advisory meeting subsequent to this comment and that the commenter was present.

Comment #MF4: The Coalition is concerned with the portion of the training provisions indicating that an employee would not be able to perform outdoor work until the employee has been trained in the heat illness provisions. The Illness and Injury Prevention Program is very specific about training being provided to employees regarding the work that they are to perform and all the hazards of the workplace. Creating a separate training timing provision would create too much of a liability for employers.

Response #4: The Board agrees that the training timing provision originally proposed needed modification. Please see the response to comment #JR5.

Elizabeth Treanor, Director, Phylmar Regulatory Roundtable

Comment #ET1: The commenter states that the existing Section 3395 is effective for most industries, and recommends that the Standards Board apply its proposed regulation

to those industries that may continue to experience heat-related illness. It is inadvisable public policy to adopt a more stringent regulation when the problem being experienced is employer lack of compliance with existing regulations. It appears that some employers have not taken steps already required, for example, providing shade and drinking water and training employees and supervisors.

If compliance with an existing standard would prevent injuries and illnesses, the issue is employer compliance, and adopting a more stringent regulation will not solve the problem. Existing Section 3395 would be effective in preventing heat illnesses and fatalities, if complied with. The Division should aggressively enforce the existing Section 3395 where employer compliance is less consistent. The serious consequences of heat illness will not be mitigated by passage of a more stringent regulation with additional provisions. However, if the Board believes a more stringent standard is necessary, we recommend that it be applied to those industries experiencing heat illness incidents.

Response #1: The Board concurs to the extent that imposing the high heat procedures for all industries currently covered by the heat regulation would be too broad. Please see the response to comment #JF1.

Comment #ET2: The commenter supports some of the provisions of the proposed rule, such as clarifying that water must be provided at no cost to employees and when shade must be up.

Response #2: The Board thanks the commenter for supporting the rulemaking process, but notes that the no-cost-water provision is being deleted, as it appears unnecessary in light of other already-existing regulations.

Comment #ET3: The requirement in 3395(c) for “fresh, pure, suitably cool” potable drinking water will be confusing to the regulated community. The Board should instead say “drinking water that meets the standards for potability and safety described in the California Health and Safety Code.”

Inserting new legal terms with which the regulated community is unfamiliar will result in confusion. Ambiguously reinventing the wheel with “fresh, cool and suitably cool” to “potable,” will result in disagreements regarding what is “pure,” what is “fresh” and what temperature is “suitably cool.” The desired objective here is to assure that all employees working outdoors have access, at no cost to themselves, to sufficient quantities of water.

Response #3: Please see the response to written comment #CC1.

Comment #ET4: Regarding the high heat procedures in Section 3395(e), there remain questions about how many “observations” of employees for alertness must be made.

Response #4: The Board believes that the employee’s adverse response to heat will generally increase in severity as the temperature rises, and that each individual will have

a different susceptibility to the heated conditions. For this reason, the Board declines to set a number of observations. However, the Board notes that a practical minimum would be to observe the employee's responsiveness when reminders are made to drink water.

Comment #ET5: How many times per shift must an employer "remind" employees to drink plenty of water [3395(e)(3)]? Typically, employers must document training to demonstrate compliance; will this be needed to show that employees were reminded to drink plenty of water? What about an employee working alone? Would prior training be considered a "reminder?"

Response #5: The Board notes that standard does not specify how many reminders must be made by a supervisor during a shift. However, subsection (c) establishes an hourly quantity of water that is to be provided to each employee and the instruction to encourage the drinking of water. The Board believes that in order to achieve these ends, these reminders should be provided on at least an hourly basis. The Board notes that nothing in the standard suggests keeping records of each reminder for water drinking.

Comment #ET6: What is meant by "close supervision" of new employees in (e)(4)?

Response #6: The Board believes that in the context of the high heat procedures, this means the supervisor must look more frequently for signs and symptoms of heat illness than would be needed for the employees who presumably have been acclimated to the current working conditions.

Comment #ET7: Although some believe that the term "practicable" implies some economic consideration, the term is not defined; what does this mean?

Response #7: The Board believes that within the context of subsection (e) this means the method of compliance is capable of being effected in a manner that is reasonable and feasible within the framework of what is available to employers.

Bruce Wick, Risk Manager representing the California Professional Association of Specialty Contractors (CALPASC)

Comment: CALPASC realizes that heat illness prevention is a very serious issue. Since 2005, when the existing standard was originally adopted, CALPASC members have worked really hard to be in compliance with it. However, there are instances in construction where to have shade up at all times when it is 85° or higher is infeasible, and those circumstances must be taken into consideration in the current proposal.

Response: The Board concurs that there are instances where shade erection is infeasible or unsafe. Please see the response to comment #DH1.

Maria (Pilar) Gonzales

Comment: Her husband, Gregorio Hernandez Rubio was a construction worker that died in 1994 from heat illness. He did not have access to shade, emergency communication with a supervisor, a trained person to observe him for symptoms and he did not have enough water to drink. The Board is encouraged to adopt the proposed provisions so construction workers are given the protections her husband did not have and no one else suffers his fate.

Response: Please see the response to Ms. Gonzales's written comment.

Cory Bykoski, Safety Officer representing Dynalectric

Comment: His company's first goal is always to ensure the safety of its employees, and it does everything possible to ensure that they go home in the condition they came in. The lack of feasibility language in the current proposal is a problem. He displayed a photo demonstrating the hazard presented by shade structures erected at the side of the road. A semi-truck drove past; the wind generated by the truck lifted the shade structure, and one of the support poles went through the windshield of a passing vehicle. The photograph showed the windshield of that vehicle with a hole approximately three inches in diameter. In addition, the pole went through the seat of the car on the passenger side; if someone had been sitting in that seat, he or she would have been impaled. The previous day, a crew had a shade structure erected, a semi-truck passed by, and the canopy of the shade structure came loose and blew into the street, causing drivers to maneuver away from it. While Dynalectric wants to take care of its employees, sometimes these structures create a greater hazard to both employees and the general public.

Dr. Frisch asked Mr. Bykoski to explain the alternatives to shade used in cases where it is infeasible to erect a shade structure. Mr. Bykoski responded that the first thing his company does when it gets to a job location is assess the ability to erect a temporary shade structure. If they are unable to erect a temporary shade structure, they will try to erect a permanent structure that provides the required shade, such as the side of a building. All supervisors are trained in first aid and CPR, and they are always onsite with the employees. There is always someone on the jobsite with an available truck, and all of the jobsite trailers are air-conditioned. If an employee were to become ill, the supervisors have the training to treat that individual onsite, and a plan is in place. The supervisors can also transport the individual to the trailer, where he or she can sit in the air-conditioned trailer, and the supervisor will continue monitoring that individual's health. Mr. Bykoski indicated that his company has implemented other administrative controls in lieu of providing immediate access to shade.

Response: The Board thanks the commenter for providing evidence to show that the current proposal should have an exception that will take into account the hazards that could be created by complying with the existing language. The Board also appreciates the

information regarding an alternative measure to having a shade structure in place. Please see the response to comment #DH1.

Bo Bradley, Director of Safety, Health, and Regulatory Services representing the Associated General Contractors of California (AGC)

Comment: AGC submitted photos demonstrating examples of situations in which it would be infeasible or unsafe to erect a temporary shade structure. She stated that most of these situations occur in road work, and employers use alternatives such as working early, rotating crews, cool ties, and air conditioned trucks. The difficulty lies in having the shade up at all times for these jobsites. There is no difficulty erecting shade at fixed construction sites, but the construction industry needs some flexibility for sites where it is not feasible or would create a greater hazard to erect a shade structure.

Dr. Frisch asked whether Mr. Bykoski's description of the administrative controls used in lieu of erecting shade is consistent across the construction industry. Ms. Bradley responded affirmatively.

Response: The Board thanks the commenter for providing evidence to show that the current proposal should have an exception that will take into account the hazards that could be created by complying with the existing language. Please see the response to comment #DH1.

Alma Alvarez, a Community Worker representing California Rural Legal Assistance (CRLA)

Comment #AA1: The commenter conducts field investigations as part of her job. She stated that she has found water containers in which there are mold, leaves, or sand, and some of the containers are broken, or there are no drinking cups. Workers sometimes have to drink directly out of the 10-gallon container, or they have to create a drinking container. Workers have told her that although there is water, it is ten minutes away. For example, grape and chili rows are approximately two miles long, and it will take a worker carrying two buckets full of produce ten minutes to reach a shade structure or water container. Breaks for workers are ten minutes at a time; thus, if it takes ten minutes to walk there and ten minutes to walk back, there is no time to rest or get a drink of water. Although these workers are entitled to these breaks, it costs workers money to take a break if they work under a piece rate or a quota system. They are afraid of losing their jobs if they fall behind their quotas or if they are working on a piece rate basis and making less than minimum wage.

Response #1: The water contamination and access restrictions that are described by the commenter should be addressed as potential violations of Section 3457. The shade access issues are addressed in the proposed changes to subsection (d). With regard to the issue of piece rate pay, please see the response to comment #AK11.

Comment #AA2: Most of these workers have not been trained to recognize the symptoms of heat stress, and they do not know what the symptoms are. They do not know that when they have a headache or begin to feel dizzy that something may be wrong, but if they fall behind their quotas, they will be fired. Workers also have reported that although there is shade, there is no ground cover, and they must sit or lie on the hot ground. The cooling effect of sitting under the shade structure is offset by having to sit on hot dirt.

Response #2: The Board thanks the commenter for demonstrating on a practical basis that there is a very real need to provide training to employees to enable them to recognize the symptoms of incipient heat illness and the training portions of the proposal respond to these concerns.

Comment #AA3: This past summer, temperatures in the Central Valley reached as high as 110° and 112°, and working directly under the sun can make the temperature feel about 15° higher. Although there were no reported incidents of heat-related deaths this year, workers reported fainting and other symptoms of heat-related illness. One woman fainted in June, but because it happened approximately 30 minutes before the end of the shift, no medical treatment was provided, and no ambulance was called. She was told to sit down and drink some water because the shift was ending. She went home, and she went to the hospital. So there may not be any official reports of heat-related incidents, but that does not mean that they are not happening.

Response #3: The Board thanks the commenter for this information, which shows the need for such portions of the proposal as the high heat requirements.

Comment #AA4: Most workers that report any type of injury will be fired, will not be hired back into the system, and will be blacklisted. Thus, most of these workers are afraid of reporting injuries. If foremen and supervisors are not trained to recognize the physical symptoms of heat-related illness, they will not know that a worker who falls behind or complains of dizziness or headache may be suffering from heat illness.

Response #4: The Board thanks the commenter for clarifying the necessity for training supervisors.

Comment #AA5 (including interchange with Board Member Jonathan Frisch: Dr. Frisch stated that water contaminated by mold, leaves, or sand cannot constitute potable water. Ms. Alvarez agreed. Dr. Frisch then stated that the existing regulation requires potable water, and water contaminated by mold, leaves, or sand is a violation of that requirement. He stated that nothing in the proposed standard or in the language provided by CRLA addresses the compliance issues that are evident, and noncompliance will continue to be a problem while people are afraid to report injuries or to identify circumstances in which injuries can occur. Ms. Alvarez responded that the burden should not be on the worker to ask for breaks or cool-down periods; they should be mandatory. Dr. Frisch asked whether there should be an agriculture-specific standard rather than a general industry standard. Ms. Alvarez responded that the standard should be applicable to all industries because

agricultural workers are not the only employees at risk of heat-related illnesses, construction workers and utility workers are affected as well. Dr. Frisch responded that construction workers and utility workers are not employed on a piece-rate basis, and they are not subject to many of the same conditions faced by agricultural workers. Ms. Alvarez responded that she could comment only on her area of expertise, which is agriculture.

Response #5: The Board thanks Ms. Alvarez for these additional comments; they do not include suggestions for modifying the proposal, and no further response is in order.

Comment #AA6: The following farm workers spoke of the conditions in the fields, stating that some employers do not provide shade, and they are told by employers that if they do not like the conditions, they can leave the job. Their comments were translated by Ms. Alvarez and are in support of her above comments:

- Eduardo Ramirez
- Pedro Sastre
- Samuel Veladez
- Moises Lopez
- Alberto Ledesma
- Lorenzo Morales
- Lucinda Hernandez
- Lidia Rodriguez
- Guillermina Gonzalez
- Rufino Ventura
- Isidro Jaimes

Dr. Frisch asked whether all of the workers on a shift take their breaks at the same time. Mr. Ledesma responded affirmatively, stating that they take a break in the morning at approximately 9:00 or 9:30 a.m.

Response #6: The Board thanks these individuals for their support of the proposal and providing examples of conditions that would require shade.

Reyna Castellanos, representing the Dolores Huerta Foundation

Comment: While working on ground crops such as chilies, tomatoes, and broccoli, farm workers do not have access to shade by sitting under the vines or under a tree during their break-times, such as the required ten-minute break or lunch break. When they take their ten-minute breaks or their lunch period, they are forced to sit in the sun. If they are not provided with shade sufficient for everyone on the shift, they have no choice but to sit in the sun. If they are not sitting in the shade, she asked, is it considered a break? Thus, it would be reasonable for every worker to have access to shade rather than 25% of the

shift. Currently, agricultural workers have to take their lunch break by the restrooms because that is the only shade available to them at times.

Response: Please see the response to written comment #MS5.

Steve Johnson, Director of Safety and Compliance Services representing the Associated Roofing Contractors of the Bay Area Counties (ARC-BAC)

Comment: The commenter supports the comments submitted by the Cal Chamber Coalition.

Response: See the response to Ms Fisher's comments.

Rudy Lopez, Risk Manager representing County Line Framing

Comment: The existing regulation is effective, and it is incumbent upon the stakeholders to comply with the existing regulation.

Response: Please see the response to written comment #JF2.

Silas Shawver representing CRLA

Comment #SS1: While more effective enforcement is needed, the proposal is an improvement on the existing regulation. For example, the shade provision in the existing regulation has been interpreted by some employers to mean that as long as the shade is accessible by request, they are in compliance. However, there are some serious loopholes, one of which is that there is no right to access the shade for more than five minutes at a time. If the intention of the standard is to prevent heat illness, there has to be a provision where people can take regular breaks in the shade and recover from the heat. One of the commenter's concerns with the current regulation is that he cannot tell a worker that he or she has a right to take a rest period in the shade; it must be requested from the employer. Even if it is requested, the worker is allowed only five minutes for a rest period. The trigger temperature is too high, and the high heat procedures should be triggered at a lower temperature as well. Water must be not only potable but also palatable; it must not smell or taste bad. A regulation must allow people to access shade and water without having to ask special permission or having to know their exact physical needs. In agricultural work, there is often no set break time, and there is no requirement for employers to make sure employees are taking breaks.

Response #1: Please see the responses to written comments #AK10, #CC1, and #AK15.

Comment #SS2: Dr. Frisch stated that many of the violations described by the farm workers who testified are beyond the scope and capacity of the Board, they are disturbing, appalling, and disheartening, and they are circumstances violating the existing regulation. There were numerous requests for more enforcement, and Dr. Frisch asked

how adopting a more stringent regulation will improve enforcement. If employers are not complying with the existing law, they will not comply with a new one. These employers are not people who do not understand what it means to comply with the regulation, these are people who are willfully not treating their employees with respect, and the Board cannot fix that. Mr. Shawver responded that increasing the amount of shade, and being able to tell workers that they have a right to use the shade during their breaks will be much more effective than the current interpretation, which is that workers have to ask to rest in the shade. A stronger standard will make it easier to identify employers that are not in compliance, and workers will have a better understanding of their right to use the shade during their breaks.

Response #2: The Board believes that the amendments of the regulation establishing that shade is to be present at and above 85 degrees and to have shade present for a minimum of 25% of the workforce, along with the training requirements, strengthen the regulation.

Comment #SS3: Chair MacLeod stated that his understanding of this morning's testimony is that if a worker were to request shade or water, that worker would be fired. He asked how the Board could rectify that. Mr. Shawver responded that there are some employers who are really bad and fire people for all kinds of reasons. There are going to be situations where people are going to be fired for asking for anything; that is common, but if there is stronger protection available to everybody without having to ask for special permission to use the shade, workers will have more access to shade.

Response #3: The Board believes that the requirement to have shade erected at 85 degrees provides some amelioration of the issue of asking for shade.

Comment #SS4: Chair MacLeod then stated that there had been several requests for more inspections, and Cal-OSHA had indicated in June that they are at their limit in terms of what they are able to do to provide inspections in agricultural areas. He asked what the Board could do about that. Mr. Shawver responded that CRLA does outreach to workers and distributes materials from Cal-OSHA. They try to collect information that helps Cal-OSHA to be more efficient in their targeting so when they go out on sweeps or looking for violations, they are more likely to find the places of greatest violations, and CRLA would continue doing that, as well as working to publicize changes and significant improvements in the law that will create greater awareness and help Cal-OSHA to do its job better. Mr. Shawver agreed that that would continue to be an issue and a challenge.

Response #4: The Board believes that the Division would be more effective with inspections with this type of assistance and participation.

Comment #SS5: Chair MacLeod stated that one of the concepts that has been discussed is to have specific Agriculture Safety Orders under Title 8 reform, and he stated that he continues to believe that the idea has merit and should be done. He stated that he has been attending these Board meetings for nearly 15 years, and this is not the first time this has been discussed. It is very frustrating to try to solve problems that are potentially

unsolvable by the Board. He asked whether Mr. Shawver felt that there should be Agricultural Safety Orders, and asked if CRLA could revisit the issue of having regulations focused on an industry that is very different and separate from general industry. Mr. Shawver responded that although he works exclusively in agriculture, it seems the risk for heat illness exists for all industries. Many industries have the shade up, and they are working in more stable locations, so many times it will be less of a transition to comply with the existing regulation. Chair MacLeod stated that crops are not grown in the shade. Mr. Shawver agreed, but he stated that there are solutions to the problem of providing shade for the workers. Although he sees a lot of problems in agriculture, he does not see them as exclusively agricultural problems. He is not in a position to determine which industries should be included in a regulation and which should not, because that is not his field of expertise.

Response #5: Please see the response to written comments #JF1 and #WH1. In addition, the promulgation of Agricultural Safety Orders is beyond the scope of this proposal.

Comment #SS6: Mr. Prescott stated that he is appalled by some of the stories he has heard today, but the unfortunate reality is that the majority of them dealing with piece work and pricing is outside of the Board's jurisdiction. In the area over which the Board does have jurisdiction, however, most of the conditions described were violations of the current standard. He asked how the additional standards without any additional enforcement are going to make a difference. Mr. Shawver responded that there are going to be continued enforcement problems and there are going to be employers who violate the law. However, when Cal-OSHA told employers this summer that shade has to be up at 85°, more shade was provided. As for the piece rate problem, if there is a regulation that requires mandated rest periods for people during high heat periods, which does not currently exist, more people would take rest periods that are not taking them now because of the work pressure or the financial incentive. There are many workers who would benefit and be safer with those types of changes.

Response #6: Please see the response to comment #AK15.

Mateus Chavez representing the United Farm Workers Union (UFW)

Comment: Ten farm workers have died since the existing regulation was adopted, and while Cal-OSHA has made progress, it is not enough because farm workers are still dying. It will only be enough at the point that farm workers are not dying. Although he recognizes that some of the issues are beyond the realm of the Board, the existing regulations do not go far enough because workers do not have the ability to easily elect representation to enforce the existing laws. It should be easier for workers to join a union, because Cal-OSHA does not have the manpower to enforce all of the laws, and workers need to have the ability to have someone speak for them. There are over 80,000 farms in California, and Cal-OSHA does not have the ability to reach all of them. The UFW's position is that a solution to this problem is the passing recent legislation SB 789, which was recently vetoed by the Governor.

Mr. Prescott asked whether UFW would be supportive of having separate agricultural standards as has been discussed. He asked whether that entire industry is different enough that it should have a separate set of standards outside of general industry. Mr. Chavez responded that UFW is currently engaged in a lawsuit against Cal-OSHA, and he has been asked to leave all comments of this type to the attorneys.

Chair MacLeod asked whether UFW provides any training with workers and employers regarding the existing regulation. Mr. Chavez responded that he believes UFW does provide training, but he could not answer with certainty.

Response: The Board notes that the changes being proposed by Mr. Chavez do exceed the legislative mandate of the Board and declines to adopt the recommended changes into the regulation.

Dave Harrison, Special Representative for Operating Engineers Local No. 3

Comment: The commenter summarized his written comments, stating that if the two requested exceptions were added, Local 3 would support the proposal. He stated that he was not asked to participate in drafting the proposal language.

Mr. Prescott asked whether Local 3 had asked to be involved with the rulemaking after the June meeting. Mr. Harrison responded affirmatively. Mr. Prescott asked whether that request was granted, and Mr. Harrison responded in the negative.

Dr. Frisch stated that in the proposed language, there is an exception for alternative methods of cooling, and he asked whether there is something about that exception that is insufficient. Mr. Harrison responded that he thought that exception had been removed. He was informed that it had not been removed.

Response: See the responses to Mr. Harrison's written comments.

Kevin Lancaster, Attorney representing the Veen Firm, PC

Comment #KL1: A lot of science went into the development of this proposal. Whether or not any of the interested groups had an opportunity to participate in the development of this proposal, the Division has done an incredible job of making it widely known that this proposal was being developed. He stated that meetings had been held all over the state, and no one has been excluded or prevented from speaking. Therefore, when he hears some of the stakeholders say that they have not been given an opportunity to draft the language, that may be legally true, but in terms of providing an opportunity for public comment by all of the stakeholders identifying their issues relating to the proposal, he wanted to ensure that the Board appreciates the extent to which the Division has allowed any stakeholder to provide public comments, no matter how ill-informed their views may be.

The commenter stated that although there had been comments from agricultural workers, the Board had not yet heard from construction workers, boilermakers, or any of the trades that work outdoors, and he did not want the Standards Board to think that the only people exposed to the hazard of heat illness are agricultural workers. The injury and illness prevention program analysis of the hazard, the training, the remedial measures, and everything else that relates to the issue of heat illness is industry wide. There is not a special heat that is an agricultural heat; the sun that is cooking the workers picking broccoli is not different from the sun that cooks boilermakers or construction workers. He stated that the work performed by the Division over the last eight years to come up with any kind of a standard that makes any sense at all has been an effort at developing a single standard that applies to all outdoor workers; indoor workers have been excluded.

The commenter stated that there are two classes of employers: The willful employers that violate a statute or regulation willfully, knowingly, inhumanely, immorally, and illegally; and those who, through neglect or ignorance, are not in compliance. He stated that some of the supervisors that are the people in the front lines of implementing the existing standard at the agricultural level are ill-informed. The common theme over the eight years of developing the standard from the stakeholders is what employers are supposed to do and when they are supposed to do it.

The commenter stated that what has been learned from the scientific perspective is that it is impossible to have wet bulb and dry bulb temperature equipment out in the field, and a health and safety engineer cannot be out there calculating heat loads, because that was the complaint about getting started with the heat illness standard eight years ago. He stated that bright lines were needed as a way to tell people that are not scientifically equipped to make these determinations as to what to do and when to do it, which is what the stakeholders requested.

The commenter stated that he supports the proposal because it is manageable, and there are bright lines. The Board has commented that it cannot do anything about enforcement. The commenter wanted to clarify that enforcement is taking place, the Division is pulling people out of other areas and sending them out to perform enforcement of the heat illness standard. Shade is not available when it is in the truck, it is available when it is on the site and it is up. It is easily visible when it is erected. Requiring certain conduct of employers will protect workers. He stated that piece rates are not the only disincentive to comply with the standard; there is also intimidation at work.

The commenter summarized by saying that a lot of work has gone into the proposal, the stakeholders that have spoken today have spoken many times in the process of drafting these amendments, and he supports the proposal as written.

Response #1: The Board notes that subsequent to this comment, an advisory meeting was convened in November by the Division that was attended by stakeholders including both

employer and labor representatives. Also, supervisory training has been discussed in the response to written comments #JZ7 and #JR5.

The Board also thanks the commenter for his participation throughout the process of developing this standard.

Comment #KL2: Dr. Frisch stated that Mr. Lancaster had made an assertion that there is a practice to buy a shade structure, put it in the truck, and leave it in the truck. He asked how that constitutes an employer being ill-informed about the requirement. If the employer bought a shade structure, he obviously knew it was required. He stated that it is hard to believe an employer is ill-informed if he has complied in some way with the regulation, and yet he is failing to use the tool he has purchased; that is completely contrary to itself. Mr. Lancaster responded that it is, and he explained that he had used that example in the context of the issue of enforcement. He stated that there are two types of employers: the willful and the ill-informed. Dr. Frisch stated that there is a third type, which is the compliant and well-informed employer. Mr. Lancaster stated that compliance and enforcement was the context of his comments about buying the shade and keeping it in the truck. His interpretation of Dr. Frisch's question is that there might be some reluctance to make a rule if the rule could not be enforced. He was trying to address the issue that having a requirement that the shade be up would help in the efficiency of enforcement finding either the well-informed and willful or the ill-informed employers.

Dr. Frisch stated that the point he was trying to make about enforcement is that the Board is determining not whether to create a regulation but to change one that already exists. Thus, he needs to understand why the change is necessary. If the Division is already at the limits of enforcement, and it is already finding hundreds of companies that are out of compliance, it does not seem like a new regulation is needed, but the existing regulation needs to be enforced.

He stated that Mr. Lancaster had made the assertion that science went into this proposal, and he asked Mr. Lancaster to explain the science behind the 85° trigger temperature. Mr. Lancaster responded that in order to have a true measure, an accurate scientific measure, of when to implement specific precautionary measures, the need for technology is too high to impose it on employers. To actually have dry bulb and wet bulb temperature requirements in the field is impractical. Dr. Frisch asked again for justification of the 85° temperature. Mr. Lancaster responded that 85° was a measure that at least was prophylactic in its ability to anticipate where danger from heat would arise.

Mr. Prescott stated that Mr. Lancaster had indicated there had been stakeholder meetings all over the state where people had had opportunities to contribute to the proposal. He asked which meetings Mr. Lancaster was referring to, because Mr. Prescott was not aware of any. Mr. Lancaster responded that there had been heat advisory committee meetings in Sacramento, San Francisco, and Los Angeles. Mr. Prescott asked whether those meetings were for the existing regulation and not the current proposal. Mr.

Lancaster responded that the meetings had been held in connection with the existing regulation, not for the proposed changes.

Response #2: The Board thanks Mr. Lancaster for participating in this process. Nothing in this comment augurs for changing the proposal.

Michael Smith representing WorkSafe

Comment: Mr. Smith stated that Dr. Frisch's question to Mr. Harrison cleared up the question as to whether non-agricultural employers have an exception to the shade requirement; that exception is present in the proposal. It is good that the proposal has a trigger temperature that provides a bright line, but there should be a reflection of the medical realities of heat illness. He recommended the written comments submitted by Alicia Gonzalez-Flores, a medical student at UCSF for more information on those medical realities. He stated that he could not vouch for the methodology of the Division's research that talked about how compliance with the existing standard has gone from the 30% range to the 80% range, but the fact that there has been an increase is a reflection that the Division's education and enforcement efforts have paid off to a certain extent. Although 100% compliance is always desirable, it is undeniable that there has been an improvement in compliance among employers throughout the state. To the extent that there are bright lines in the proposal with regard to shade, the 85° trigger temperature is a bright line, it does not put the onus on employees to make the request, and if shade is not up at that temperature, the Division can cite the employer. The improvement will not happen overnight, but as the experience with the existing regulation has shown, the improvement will be continuous. He also stated that the trigger temperature should be lower; the study performed for Cal-OSHA in 2006 demonstrated that heat illness can occur at temperatures as low as 75°, so the triggered temperature should be lowered to that level with high heat procedures triggered at 85°.

Response: The Board thanks Worksafe for monitoring the progress of compliance efforts. The Board recognizes that compliance throughout the state will take time and the continuing efforts of the Division and all stakeholders to make this happen. The Board believes that the recommendation to lower the trigger temperature to 75 for shade and 85 for high heat procedures does not at this time have sufficient data to justify the significant added effort that employers would have to make, especially in areas where those temperatures are more of an average during the warmer periods of the year. The Division has experience with complaints being noticeably more frequent when temperatures reach 85 and above. The performance of employers and the resulting incidence of heat illness following the adoption of the 85 trigger can be evaluated to see if the regulation should be amended in the future. Consequently, the Board declines to adopt the recommended change to the proposal.

Aaron Campbell, representing the Western Center for Agricultural Health and Safety at UC Davis

Comment: The commenter has not seen any evidence supporting the trigger temperature of 85°. He stated that UC Davis has made efforts to get support for a research study of heat illness. During the time he has spent in the field in the last two years, he has seen many employers that take care of their employees, but the potable drinking water issue has come up many times.

Response: Please see the response to written comment #JZ4.

Chris Baker with the City of Santa Rosa Utilities Department

Comment #CB1: The shade provision would be difficult to meet in his line of work, because the work is very mobile. In addition, there is often not enough space to get the equipment in and do the job without having a great effect on traffic, and having to erect a shade structure in a temporary traffic control situation presents a number of issues, including the necessity to elongate the traffic control set-up, distracting passing motorists, and having the shade structure blown away by a passing truck. He stated that the 85° and 95° trigger temperatures provide good guidelines, because he can pay attention to weather reports and plan for those temperatures.

There are crews that go from intersection to intersection, opening or exercising (closing and opening) valves, so they are mobile. They are not at one site for more than ten or fifteen minutes, and setting up a shade structure for that short a period of time would be infeasible. Mr. Baker also expressed concern about emergency responders, asking when and where police and firefighters would erect shade structures at accident scenes or when fighting fires. The CalTrans manual for traffic control and the MUTCD both provide guidelines for emergency work, short duration work, and mobile work; those manuals also acknowledge the increased vulnerability when a crew is setting up traffic control. He asked that the Division examine the definitions for short duration work, mobile work, and emergency work, and develop alternate measures for heat relief in those situations.

Mr. Prescott thanked Mr. Baker for his comments, which illustrated the need for an exception to the shade requirement.

Response #1: The Board notes that the Division has proposed an exception to the requirement as explained in the response to written comment #DH1.

Comment #CB2: Dr. Frisch asked whether workers are able and allowed to take a break if they are not feeling well. Mr. Baker responded affirmatively, stating that workers are trained to seek out shade when they start feeling any symptoms of heat illness, and they are to stay in the shade until they feel good enough to go back to work. Dr. Frisch also asked whether it was Mr. Baker's experience that other cities have similar concerns. Mr. Baker responded affirmatively.

Response #2: These comments are consistent with the proposal and do not call for changes.

Anne Katten representing CRLA

Comment #AK1: The commenter expressed support for the idea of a trigger temperature, although it should be 75° instead of 85°, which is supported scientifically. The National Weather Service's heat index dictates that the temperature be adjusted by 15° if one is working in full sunlight, which means that a 75° ambient temperature meets the threshold for extreme caution.

Response #1: Please see the response to written comment #JZ4.

Comment #AK2: Agricultural workers, in particular, do not feel comfortable taking a voluntary break, so they need to have access to shade during regular breaks that are specified and scheduled. The American Congress of Industrial Hygienists has developed a threshold limit value (TLV) that specifies hourly breaks above certain temperature-humidity thresholds, which are used by both the Navy and the Army. She further stated that there should be a method of compensating piece-rate workers so they will not be financially penalized when they take breaks or cool-down periods.

Response #2: Please see the response to written comments #AK10 and #AK11.

Comment #AK3: The proposal should contain a separate emergency response section that clearly states the obligation to provide immediate first aid in the shade and emergency medical transportation, which is especially important for the smaller, less sophisticated employers who may not understand the necessity from reading the proposal as currently written. Delays in the provision of first aid and emergency medical care are the difference between life and death or permanent organ damage and full recovery.

Response #3: Please see the responses to written comments #LP6, #CG3, #CG4, and #AK18.

Comment #AK4: The commenter further stated that there is a need for all workers, whether outdoor or indoor, to be protected from heat illness. One thing that is different in agriculture versus construction is that in construction, there is a clear chain of responsibility, where some of the subcontractors do not adhere to safety requirements, the general contractor is responsible. The logical analogy to that in agriculture would be to hold the grower or the property manager responsible if the farm labor contractor does not adhere to requirements.

Response #4: Please see the response to written comments #JF1 and #AK2.

Comment #AK5: Dr. Frisch thanked Ms. Katten for addressing the science of a trigger temperature, and he asked whether there is a feasibility issue in agriculture that would be different at one trigger temperature versus another. Ms. Katten responded that she has not heard of any examples in agriculture where it would be infeasible to provide safe shade. Dr. Frisch asked whether it is unreasonably difficult for agricultural employers to erect shade structures. Ms. Katten responded that the usual procedure is to erect pop-up structures, and they would have to move during the day so they are close to the workers, but it is not unreasonably difficult to do so.

Response #5: This comment does not call for changes in the proposal. Therefore, no further response is needed.

Bill Taylor, Safety Manager for the City of Anaheim representing the Public Agencies Safety Management Association (PASMA)

Comment: The commenter summarized his written comments.

Response: See the responses to Mr. Taylor's written comments.

Amy Wolfe, Executive Director of AgSafe

Comment #AW1: The commenter expressed support for the proposal, stating that the clarifying language provides the level of detail so frequently requested at AgSafe trainings. By adding this language, the Board is equipping employers with a clear set of parameters to follow, and as a result, helping to ensure the minimization of heat related illness and injury.

Response #1: The Board thanks the commenter for supporting the proposed amendments.

Comment #AW2: Dr. Frisch asked whether AgSafe would support the proposed changes with a lower trigger temperature. Ms. Wolfe responded affirmatively, stating that the issue is having clarity, regardless of the details of that clarity.

Chair MacLeod asked whether the AgSafe membership includes farm labor contractors. Ms. Wolfe responded affirmatively. Chair MacLeod then asked for Ms. Wolfe's reaction to the testimony presented by the agricultural workers regarding their experiences. Ms. Wolfe responded that because AgSafe is a voluntary membership-based organization, they are working with those individuals who are seeking to be compliant and to do the right thing for their employees.

Mr. Kastorff stated that the Board had heard a number of horror stories this morning. He asked Ms. Wolfe whether she would agree that they come primarily from noncompliance with the existing regulation rather than partial compliance. Ms. Wolfe stated that she was not equipped to answer the question accurately. She stated that the stories told this morning were atrocities, describing conditions that are completely unacceptable.

However, they are also an illustration that in every industry there are bad apples that tend to generate perceptions of universal failure to comply.

Mr. Prescott asked whether there had been a major change in compliance this year as opposed to previous years. Ms. Wolfe responded affirmatively, stating that her opinion is based on the number of people that have signed up to take courses with AgSafe. The fact that there has been such tremendous demand for education on the part of all segments of the industry to want to understand and to know how to reasonably implement compliance with the regulations is an indication of a desire to be compliant.

Response #2: This comment does not call for changes in the proposal. Therefore, no further response is needed.

Don Bradway, Safety Manager for Monarch-Kneis Insurance Services

Comment #DB1: The term "suitably cool" is not adequately defined in the proposal. Similarly, the term "fresh" is nebulous. Mr. Bradway cited the example of the bottled water that he keeps in his truck. He may have bought it a month ago, but it is still fresh because it has not been opened. The applicable terms should be "clean" and potable. Water is not used primarily to cool the body but to keep it hydrated, so the temperature is not of primary importance.

Response #1: The Board thanks the commenter, but refers to the response to written comment #MF2. This proposal has been modified to delete the allegedly ambiguous words in question.

Comment #DB2: The training provisions should be timely. If an employee receives heat illness prevention training only at the time he or she starts the job, and that is in winter, heat illness is not going to be a concern. Training should be mandatory at the beginning of the heat season.

Response #2: Please see the response to comment #JR5.

Comment #DB3: The commenter stated further that there should be a separate regulation for agriculture.

Response #3: The Board has addressed the issue of scope in the response to written comment #JF1.

Lorajo Foo, Legal Director representing WorkSafe

Comment #LF1: The current regulation, in subsection (d)(4), states that except for employers in the agricultural industry, cooling methods other than shade (e.g., use of misting machines) may be provided in lieu of shade if the employer can demonstrate that these measures are at least as effective as shade in allowing employees to cool. She stated

that this provision of the existing regulation allows alternatives and allows the employer to choose more effective measures. Thus, when employers use examples of the havoc that will be wreaked and of the safety problems that are going to occur with the new regulation, it is nonsense. The new regulation is not going to revise the current regulation in terms of the exception for non-agricultural employers. The new regulations are not going to require police officers or firefighters to erect shade structures. The new regulations will not force employers to come up with measures to protect workers from heat that will create other safety hazards. The testimony about the construction industry or other mobile workers is nonsensical when one realizes that the existing regulation allows all employers outside the agricultural industry to come up with various means of protecting workers from illness.

Response #1: The Board notes that a modification has been proposed to allow for employers to provide effective alternatives to shade for some circumstances as discussed in the response to written comment #DH1.

Comment #LF2: Mr. Prescott stated that the concern is that a misting machine cannot be hooked up for a mobile work crew. Ms. Foo responded that misting machines are used as an example; it means "including but not limited to" misting machines, and employers are well aware of how to protect their workers. There are many methods to do so, and a rule does not need to spell out every single alternative. Mr. Prescott then asked that if he, as an employer, had a written procedure that said shade would not be erected because it is not feasible, but in lieu of that other measures would be taken (such as sitting under a tree or in an air-conditioned truck), would Ms. Foo consider that exception to be covered under the exception. Ms. Foo responded affirmatively.

Mr. Prescott stated that the Division does not. Mr. Welsh disputed that, stating that this question had been raised at the last meeting, and he said that it could be handled through policies and procedures given the current provision in the regulation.

Response #2: This comment focuses on an interpretation of existing wording and not on the proposal, and therefore, no further response is needed.

Charity Nicolas, Assistant Risk Manager for Contra Costa County and the President of PASMA North

Comment #CN1: The commenter expressed opposition to the proposal as written and support for the changes recommended by the City of Santa Rosa, PASMA South, and the City of Anaheim. In addition, she expressed concern about the proposal with regard to employees working alone in the field or working in small groups, in particular regarding the provision of shade and observing employees for signs and symptoms of heat illness. She stated that the term "potable water" in the existing regulation is sufficient, and "fresh, pure, and suitably cool" is vague.

Response #1: Please see the response to written comment #CC1.

Comment #CN2: Dr. Frisch asked Ms. Nicolas to describe the alternate, administrative procedures in place for individual employees in the field in the case of high heat situations. Ms. Nicolas responded that the existing regulation requiring shade to be accessible is sufficient, if employees are trained in the importance of having shade available, whether that shade is in their vehicle or under a tree. Dr. Frisch asked whether all of Ms. Nicolas's employees carry communications devices. Ms. Nicolas responded affirmatively.

Response #2: The Board disagrees that the existing regulation is sufficient for the reasons stated in the Initial Statement of Reasons, as supplemented by these responses to comments.

Joan Cuadra, Safety Trainer for Proteus, Inc.

Comment #JC1: For the last couple of years the heat illness trainings directed primarily at farm labor contractors have trained approximately 5,000 workers. Because of the standard, she asks people in the field who has been trained about the standard, and approximately 30% of the workers will affirm that they have been trained during that year.

Response #1: The Board thanks the commenter for providing a realistic view of current compliance with the training requirements of the existing standard.

Comment #JC2: The commenter asked that the proposal state clearly that the water should be clean, because many of the crew bosses live in areas where they cannot drink the water from their faucets, yet they are filling the water cisterns for their crews from their own homes.

Response #2: The Board notes that the existing requirement does require the water to be clean within the requirements for drinking water as established by the Health and Safety Code. The practice described may violate that requirement.

Comment #JC3: The commenter asked that the proposal state clearly that the water should be very close to the workers so they can access it readily. Many times there is no shade or water available to workers because of a lack of enforcement.

Response #3: The Board believes that the proximity of water is addressed within the standard and the other standards cited by reference. Please see the response to written comment #CC1.

Comment #JC4: The commenter also stated that there is a lack of low-literacy training material available. Although there has been an improvement in the training materials, many crew bosses are given the responsibility to train their crews, and they may have a second-grade education or no education themselves. It is difficult for someone with a

limited education to have materials written at a higher level and ask that these materials be used to train workers.

Response #4: The Board believes that a problem of this nature should not be addressed within the regulation itself, and is more appropriately handled by the Division or service organizations who prepare guidance documents or training materials.

Comment #JC5: She further stated that shade should be available for at least 50% of the workers in the field during a shift, and 100% is preferable, so all the workers can take their breaks and lunch periods in the shade. It is not unreasonable for an employer to erect three or four canopies at a worksite.

Response #5: Please see the response to written comment #MS5.

Chris Walker, speaking on behalf of the California Association of Sheet Metal and Air Conditioning Contractors (SMACNA)

Comment: The commenter expressed support for the written comments submitted by the California Chamber Coalition. He stated that the atrocities described by the farm workers are mostly violations of the existing standard, and whether it makes sense to winnow down in further detail various regulations when in fact there is no assurance that it is not going to result in any increased worker safety.

Response: The Board refers the commenter to the responses to the Chamber Coalition. Further, the Board notes that many of the proposed changes have come in response to requests for more specificity and clarification of the existing standard, and to address some gaps in protection that have been identified for this closely monitored occupational health issue.

Ed Calderon, Safety Manager for Shea Homes

Comment: He expressed support for the existing regulation, stating that his company only hires contractors that are in compliance. If they are not in compliance, they are not hired.

Response: The Board thanks Mr. Calderon for his support of the regulation and for sharing an approach to assure better compliance with DOSH regulations.

Peter Robinson, Senior Safety Officer for the California Department of Transportation (CalTrans)

Comment: The existing regulations mirrored what CalTrans had already been doing for decades with positive results. CalTrans educates employees on heat-related illness at the beginning of the hot season, and they train their desert employees year-round. Included in that training is the importance of staying well-hydrated, including drinking water in the morning before work. He stated that the shade requirement is not feasible for a mobile

work force, and some of the alternative methods mentioned previously are not feasible for CalTrans. For example, not all of CalTrans's trucks have air conditioning, and some of the trucks that do have air conditioning are diesel trucks. Air Quality Management District does not allow diesel-fueled trucks to idle unless it is an emergency. Allowing an employee to sit in an air-conditioned truck as an alternative to shade is considered a preventive measure, not an emergency. The trigger temperatures provide good, bright line guidance for employers and trainers. Mr. Robinson expressed support for any measures that will make the existing standard more enforceable.

Response: Please see the response to written comment #DH1.

Chris Baker, City of Santa Rosa (further comment)

Comment: Mr. Baker returned to refute Ms. Foo's contention that his and others' concerns regarding the infeasibility of erecting shade structures for mobile work crews are ridiculous. He agreed with Mr. Robinson's statement regarding the idling of diesel trucks. He stated that the particulate filters required by the California Air Resources Board (CARB) require cleaning because the particulates build up inside them. One of the ways to clean them is to hook them into 440 volts of power to burn off the particulates. If the diesel vehicles are idling, the particulates are going to build up more rapidly, requiring more frequent cleanings, which consumes more power and costs more money. The filters themselves cost $6,000 to $7,000, and they have a finite life span. The more often they are filled and cleaned out, the shorter that life span will be. In addition, idling normal, gasoline-powered vehicles to run the air conditioner presents a problem on "Spare the Air" days, which typically are days on which the temperature exceeds 95°. He summarized by stating that alternatives to shade are not always easy to provide.

Response: The Board agrees that certain circumstances may render the erection of shade infeasible.

Guadalupe Sandoval of the California Farm Labor Contractor Association (CFLA)

Comment: The commenter summarized his written comments.

Mr. Prescott asked whether CFLA would support separate regulations for the agricultural industry, not solely for heat illness but also for other issues that are unique to the industry. Mr. Sandoval responded that he has worked in a lot of different industries, and heat illness does not stop at the door of agriculture. He stated that a general industry regulation is necessary, but he does not know very many agricultural employers that would argue that a specialized standard for agriculture is necessary. The proposal should contain provisions that would make it feasible for any employer that has outdoor workers.

Response: See the responses to Mr. Sandoval's written comments.

John McCoy, Safety and Environmental Consultant for Lakeview Professional Services

Comment: This is not an issue of needing new regulations or more regulations or amended regulations; the issue is training, which is as important as, if not more important than, enforcement. In addition, training must be frequent and tailored to the literacy level of the employees, and they must be trained in basic matters.

Response: The Board thanks Mr. McCoy for affirming the importance of training.

Kevin Bland, representing the California Framing Contractors Association and the Residential Contractors Association

Comment: The commenter expressed support for the comments submitted by the California Chamber Coalition. He stated that the feasibility exception supported by the Coalition is a shade by request exception. It is not an exception to the provision of shade, it is an exception to shade being up, and it does not mean that shade cannot be made available nor does it mean that the employer cannot choose to use an alternate method. It is merely an exception for cases in which shade being up at all times is not feasible or not safe.

Response: The Board agrees that certain circumstances may render the erection of shade infeasible. Please see the response to comment #DH1.

Joan Gaut of the California Teachers Association

Comment #1: The commenter expressed concern regarding heat illness inside. She stated that she was concerned that it had not been included in the proposal. Although schools have shade and water outside, there are schools in the state that have been constructed for air conditioning that are left with windows that do not open when they run out of money for construction. Teachers and children, therefore, are in rooms that reach temperatures well above 95° with no cooling methods available. She asked that the trigger temperature be lowered from 85° to 75°.

Response #1: Although the Board recognizes that there situations in which indoor environments can produce heat illness, this regulation was adopted to apply only to outdoor situations.

Board Member Jonathan Frisch:

Comment: Dr. Frisch expressed concern that the proposal seems to be more and more divergent from other Cal-OSHA standards related to the provision of drinking water, and he would like to make certain that the requirements for drinking water are the same in all of the regulations to avoid confusion regarding the definition of potable drinking water. In addition, Dr. Frisch expressed concern about the cost statement in the Statement of Reasons, which indicates that there is no cost to state agencies resulting from the

proposed changes. He expressed discomfort with that statement in light of the additional supervision and training and enforcement activity that will be required. He stated that there is also an indication that there will be no cost to private persons or businesses as a result of the proposed changes.

There is a proposed requirement for the provision of shade for 25% of the employees on a shift, and while Dr. Frisch does not object to the provision, he would like to understand the basis for the requirement. There have been a lot of proposals related to how people are positioned in the shade, whether they are touching each other, whether they are standing, sitting, or lying down, and whether they are sitting in the dirt. These are all very legitimate concerns, and further explanation of how that number was reached would be appreciated.

Dr. Frisch also stated that he did not understand what was meant by observing employees for signs and symptoms of heat illness or what the qualifications of those doing the observing were to have. He stated that if close supervision is necessary, then it is necessary for all employees, not just for those who may be new to the job or not acclimated to the weather.

Dr. Frisch agreed with Mr. McCoy's assertion that training should be required all year round, and expressed difficulty with the language indicating that "no employee or supervisor shall begin outdoor work to which this section applies," stating that he was unsure whether that meant when the trigger temperature was reached or exceeded or any outdoor work. Amending that language could resolve the issue of when training needs to occur. He further stated that there is an emergency requirement that has been inserted in the training section, and he expressed concern that a requirement for something the employer needs to do is in the training section of the proposal. If emergency procedures are required, they need to be set out in a separate section.

Dr. Frisch expressed concern regarding the provision requiring an employer to monitor weather reports, stating that he is unsure whether that means the employer should simply watch the weather forecast the night before to determine what the temperature will be or if something more is required.

Dr. Frisch also expressed concern about the lack of an advisory committee, not so much because people did not have any input into the proposal but because the opportunity for discussion of varying points of view and for the development of this revised proposal. It really was not provided when the emergency regulations were established, and there has been no venue since then where people with differing points of view are able to sit down and come to agreement on how to create a workable solution. He stated that the comments received indicate that employers want to do the right thing, but one-size-fits-all may not work in this case, noting the fundamental differences in the way agriculture, construction, and other outdoor work is done. Such a proposal might eliminate many of the concerns expressed during the hearing.

Dr. Frisch referred the Division to the letter received from the CIHC, which proposed a performance-based standard for non-agricultural industries. Although that proposal is not without difficulty itself, it may be a good approach to take to address some of the concerns that have been expressed today. In addition, there had been a reference to the ACGIH TLV for cool down times. He stated that regardless of the approach taken, the Division should ensure that it has examined the available science and based its recommendations on that science.

Dr. Frisch further stated that everyone has heard him ranting about putting up shade when it is hot, and many organizations are putting it up regardless of the temperature, which makes him feel better that not all employers are ignorant and noncompliant. He discussed the Heat Index (Apparent Temperature) Chart demonstrating the general effect of heat index on people in higher risk groups and the likely symptoms at various temperatures distributed by the National Oceanic and Atmospheric Administration (NOAA). The key point is that at 90°, the general effects are sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity. He then stated that exposure to direct sunlight can increase the heat index by up to 15°, which means that 90° minus 15° is 75°. Therefore, if the trigger temperature is not going to be 75°, it needs to be reasonable and rational. The only rationale for a higher trigger temperature that he could think of was the number of days per year that the temperature exceeds that temperature. Based on that rationale, he researched temperature data for 11 stations in the state of California for which there was 100 years of data, checking for the average number of days per year the temperature exceeds 75° or 85° and the average number of days per year the temperature is between 75° and 85°. His concern is that if there is going to be a trigger temperature, that trigger should be set at a temperature that is low enough to truly be protective, and that number is not 85°.

Response: The Board notes that the proposed change in the definition of drinking water has been withdrawn as discussed in the response to written comment #CC1. Also, since the provision of shade applies not only to agriculture, but to other employers, the minimum amount of shade remains set at 25% as discussed in the response to written comment #MS5. The observation of employees by supervisors is discussed in the responses to written comments #CG2 and #CG5. The requirement for providing training was discussed extensively at the advisory meeting and has been clarified to require that it be given before employees and supervisors begin work that is reasonably anticipated to result in the risk of exposure to heat illness, which would apply primarily to the warmer seasons but also to unseasonably warm weather. The training for emergency situations is discussed in the responses to written comments #CG6 and #LP6. The cost for this training is discussed in the response to comment #JZ7. The employer responsibility to assess the temperature is discussed in the response to written comment #JW3. Subsequent to the date of these oral comments, the Division convened an advisory meeting in November of 2009 to attempt to clarify and address stakeholder concerns. The letter from the CIHC received a response in written comment #JC1 and is also discussed in the response to written comment #JW5. The Board has also determined that although there are several heat indices established by extensive research, the regulation at this time is

better served by utilizing a simple and easily determined definition for temperature and has chosen to rely on the experience of the Division that heat illness complaints are made by employees when temperatures reach 85 degrees.

Board Member Jack Kastorff

Comment: Mr. Kastorff expressed the opinion that there is consensus among the Board members and probably stakeholders that the fatalities and other problems related to heat illness primarily come from noncompliance, not from inadequate regulations. If the employers had been following the existing regulation, there would probably be fewer fatalities. He stated that although the proposed revisions are acceptable, he has questions about a trigger temperature that Dr. Frisch had just addressed. In the spirit of compromise, he suggested that those stakeholders who would prefer a trigger temperature of 85° have the burden of supporting that position. He stated that Dr. Frisch had made a very good argument for a trigger temperature of 75°. Mr. Kastorff's only concern about trigger temperatures is that there are employers who will not do anything until the temperature reaches the trigger, and he disagrees with that position. There were over 13 written comments received before the meeting, and they were not all duplicates or form letters. In addition, there were over 40 oral comments during the Public Hearing, which means that there are a total of more than 55 comments. That cries out for an advisory committee.

Subsection (4)(e) states that unless the employee indicates at the time of hire that he or she has been performing similar outdoor work immediately prior, close supervision of the employee is required. This provision is subject to dishonesty on the part of the employee, because the employee may fear not being hired if such heat exposure has not occurred.

Response: The Board acknowledges that this comment preceded the advisory meeting that was convened by the Division in November of 2009 to review stakeholder concerns about the proposed amendments. The concern regarding subsection (4)(e) is addressed in the response to written comment #JZ5. With regard to the trigger temperature of 85 degrees, please see the response to Dr. Frisch's comment.

Board Member Guy Prescott

Comment: Mr. Prescott stated that the Board was told by the Division that there would be an advisory committee before this proposal was noticed for Public Hearing, and it is a shame that there was not an advisory committee, because the comments received were very similar in nature, and today's meeting could have been much shorter had there been a dialogue with stakeholders. He stated that no one from construction and labor has been involved in the development of this rulemaking, although they had requested to be included, and he is extremely upset that labor, with the possible exception of agriculture, has been shut out of having any input into this proposal. He agreed with the other Board members that if at all possible, an advisory committee should be convened. Having a

dialogue across the table is of utmost importance to ensure that the resulting proposal is something that can be moved forward.

The suitably cool portion of the water requirement is troublesome. He stated that his concern is not so much whether the water is too hot, but whether it is too cold. If the water is too cold, it can be even worse for an employee who may be overheated. Section 3457 already outlines the water requirements for the agriculture industry, and the word potable in the current proposal is sufficient. He agrees that there is some well water in agriculture and other areas where employers may be putting less than desirable water in the containers, and the definition of potable water should be consistent throughout the requirements.

Mr. Prescott further expressed concern regarding the feasibility of the shade requirement. The Board's responsibility is to ensure that regulations are enforceable, reasonable, and understandable. If a regulation is not reasonable because it is not feasible, there is a problem with that regulation. He is very concerned about the high heat procedures. In construction, there are a lot of mobile crews that work without supervision. He asked how a supervisor would supervise a landscaping crew that he sees in the morning to provide instruction, and he does not see that crew again till the afternoon. He would like to see some changes in the language to include such situations.

Mr. Prescott stated that there has to be an exception for the shade requirement for situations in which having the shade up is infeasible or unsafe. There was some conversation earlier in the hearing that the Division and he have some different thinking on how subsection (d)(4) applies. That was meant to be an exception for areas where having the shade up creates a greater hazard or it is infeasible. There were a number of examples of infeasibility. He understands that there are areas where employers need to have shade up, but it is not reasonable to put one group of employees in an area of higher hazard in order to afford another group of employees protection when it is not necessary. Mr. Prescott voted against the emergency standard in June because that exception was missing, and if it is missing in the final proposal presented for adoption, he will be forced to vote against it again. He will not put one group of employees at higher risk to help another group.

Response: The Board notes that an advisory meeting was convened by the Division in November of 2009. The proposed amendment to the definition of drinking water has been withdrawn as discussed in the response to written comment #CC1. The feasibility issue has been discussed in the response to written comment #DH1. With regard to high heat procedures, please see the response to comments #CG3 and #CG4.

Board Member Willie Washington

Comment: Mr. Washington expressed concern that in order to protect a specific group, the proposal is applicable to all outdoor workplaces. He stated that the requirement for shade to be complete, i.e., allowing a person to sit in complete shade, would require an

employer to supply not only a shade structure but also chairs for the employees to sit. Thus, the 25% makes sense, as there is nothing stating that all workers on a shift must take their breaks or lunch periods at the same time. He expressed concern that if an employer must use methods other than shade structures for cooling, that employer must be able to demonstrate that the alternate method is as effective as shade. For example, as a building is being erected and begins to provide shade by itself, construction workers will take breaks and lunch periods in that shade, and Mr. Washington expressed concern that an enforcement inspector may view that as a violation of the shade requirement. Mr. Washington also expressed concern that the requirement for potable water should have a consistent definition throughout the standards. Simply put, potable water is water that is fit to drink.

The bottom line is that the proposal needs to follow basic common sense. Shade and water should be located where workers can easily access them, and the water must be drinkable. To have three levels of safety for a heat illness standard does not make sense. If there is going to be a shade requirement, the shade should be up when it is expected to be hot, period. He stated that California is the poster child for over-regulation in terms of penalties associated with the workplace. To the best of Mr. Washington's knowledge, California is the only state that has criminal penalties associated with violations of the occupational safety and health regulations.

The provisions requiring observation of employees for signs and symptoms of heat illness places obligations on people who are ill-trained or ill-equipped to handle those responsibilities. Some of the symptoms described depend upon skin tone, which is fine for people who are pale, but Mr. Washington expressed concern that it may be more difficult to determine whether a person with a dark complexion is suffering from heat illness. Many of the symptoms are difficult for safety professionals to recognize, let alone a foreman who has a high school education or less. He expressed a strenuous objection to this provision, as it places a burden on people who may not be equipped to fulfill that obligation.

Mr. Washington also expressed concern about the provision requiring a written program including heat illness prevention to be present on the jobsite. He stated that not only would the employer have to have a regular injury and illness prevention program (IIPP) including heat illness prevention and treatment, but the employer would also be required to have a separate heat illness prevention and treatment plan for each jobsite.

Response: The concerns regarding defining drinking water are addressed in the response to written comment #CC1. Also, if an employer is to utilize an alternative to shade, the employer has the responsibility to substantiate that the alternative has been selected in an appropriate manner since it is to the employer's advantage to apply the exception. The Board has also determined that stakeholders almost without exception have expressed a strong desire to have requirements based on clear triggers and simple criteria for temperature and the supervisory training that applies to assessing heat illness symptoms. Finally, the Board acknowledges that there are instances where a written plan that is only

available in an employer's office fails to provide needed guidance for crews working in the field.

Board Member Bill Jackson

Comment: Mr. Jackson stated that he does not think all employers are evil, and he does not think all employees are too ignorant to take care of themselves. Most of the testimony heard today appears to be about noncompliance. He cited Ms. Treanor's example from a couple of months ago that if it were discovered that people were not wearing seatbelts in their cars, the way to fix that problem would not be to require that they wear helmets too. Changing a rule that is not being adequately complied with or enforced is an attempt to solve a problem that would be solved with compliance with existing regulation.

Some of the text of the proposal, because it was not vetted by an advisory committee, leaves a lot to be desired. Dr. Frisch has done an admirable job of persuading the Board about the potential value of a lower trigger temperature. If there is some science or explanation in the rulemaking record that explains where the 85° temperature came from, it would be helpful. Subsection (d)(2) is, for all intents and purposes, the same as the existing standard to provide shade when an employee requests it without regard to the temperature. Now, however, the definition of shade has been amended to include any natural or artificial means that does not expose employees to unsafe or unhealthy conditions, which encumbers employers with an additional responsibility of determining whether providing the shade makes it unsafe. The definition seems to, in some circumstances, make it impossible for the employer to provide the shade that is mandated if it is not safe. There are some circles in the language that were not discussed; they would have been discussed if there had been an advisory committee.

Mr. Jackson expressed concern about the term "practicable" and the high heat procedure requirements about observing employees and reminding employees without any explanation regarding how frequently those observations and reminders should be provided. There is no method for an employer to determine whether he or she has done the right thing. The training requirement to train all employees about the hazards of heat illness whether or not they are going to be exposed to a heat illness situation seems unnecessary. He expressed concern about the requirement for an employer to designate an individual to be responsible for something that he or she cannot possibly have a handle on every day, all day long.

Mr. Jackson stated that he is disheartened that, when the Board met in Los Angeles in July, several of the Board members suggested that the proposal go back to an advisory committee. It seems reasonably clear that the emergency that prompted the original call for these changes has, in part, subsided. It is nearly Fall, and the temperatures are dropping.

It is time that the Board direct the Division staff to go back, convene a representative advisory committee, vet all of the ideas in the proposal, and reach consensus before

bringing it back to the Board. It is entirely possible that if the problem of noncompliance is an agricultural problem, in which case the proposal should address the problem in agriculture, unless there is some showing that the problem exists somewhere else. He suggested in July that the proper way to develop a rulemaking package was to convene an advisory committee, take input from the regulated community and the stakeholders, and present a package where there was already consensus. To write a regulation in private, force it on all employers with outside places of employment, and then sort out who is really right sometime in the future is not the way the Board should do business.

Response: The Division convened an advisory meeting to involve stakeholders in a review process that provided the basis for modifications to the proposed amendments. Although increased enforcement is desirable, the Division and advisory committee have identified aspects of the present regulation that should be modified. No regulatory wording is ever free of all ambiguity and all regulations involve choices among policy options. The Board believes the proposal as modified is the best alternative. Among other things after much discussion at the public hearing and in light of the preponderance of opinion at the advisory committee, an "unsafe/infeasible" exception has been added, and the trigger temperature (based on Division enforcement experience) remains 85°.

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 15-DAY NOTICE OF PROPOSED MODIFICATIONS

As a result of written comments to the proposed modifications contained in the 15-Day Notice of Proposed Modifications mailed on June 21, 2010, the following substantive, and/or sufficiently related modifications have been made to the Informative Digest published in the California Regulatory Notice Register dated August 28, 2009.

Subsection (a)(2)(E) is further modified to specify that transportation or delivery employers using air conditioned vehicles where no loading or unloading is done will not be required to comply with subsection (e) High-heat procedures. This change is in response to comments to the Standards Board that demonstrated that such employees do not need to be covered by subsection (e).

Subsection (b) has been further modified to revise the definition of "landscaping" to exclude operators of fixed establishments with plumbed drinking water. This change is in response to comments to the Standards Board that demonstrated that such landscape employees do not need to be covered by subsection (e).

Summary and Response to Written Comments:

Bill Taylor, CSP, Public Agency Safety Management Association (PASMA), by e-mail dated June 30, 2010

Comment #BT1: Since very few job classifications within PASMA would be covered by subsection (e) and subsection (d) has an exception, the commenter supports changes made by way of the 15-Day Notice.

Response #1: The Board thanks the commenter for supporting and participating in this rulemaking proceeding.

Garth Patterson, Heat Relief Solutions, by letter received June 30, 2010

Comment #GP1: All employers, including agriculture, should provide misting devices along with or as an alternative to shade; using misting devices' is safer than relying on shade only.

Response #1: Although misting devices are well known to provide comfort in public venues where high temperatures occur, there are certain hazards that the indiscriminate use of these devices can create. It is well established that the human body releases heat by increasing the amount of perspiration that the body produces as the temperature increases, and this releases the heat by evaporative cooling at the skin's surface. As the external humidity rises, this cooling process is impaired. Full utilization of misting devices would thus require an employer to take steps to assure that the humidity created by the misting devices does not reach a hazardous level, such as periodic monitoring of the relative humidity. Misting devices can also pose slipping hazards and electrical hazards might arise if they are improperly located or not monitored to prevent the accumulation of surface water. Therefore, the Board declines to make additional changes to this subsection.

Terry Thedell, Ph.D., CIH, CSP, Health and Safety Advisor, San Diego Gas and Electric (SDGE), by email dated July 1, 2010

Comment #TT1: SDGE supports modifications proposed in the 15-Day Notice.

Response #1: The Board thanks the commenter for supporting and participating in this rulemaking proceeding.

Carl Borden on behalf of the California Farm Bureau Federation, California Grain and Feed Association, California Grape and Tree Fruit League, Ventura County Agricultural Association, California Farm Labor Contractor Association, Imperial Valley Vegetable Growers Association, Grower-Shipper Association of Central California, California Association of Nurseries and Garden Centers, Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, Western Pistachio Association, Raisin Bargaining Association, California Seed Association, California Floral Council, California Pear Growers, California Citrus Mutual, Nisei Farmers League, Western Growers, and Wine Institute, by unsigned letter dated July 1, 2010

Comment #CB1: These organizations support the standard as proposed in the June 21, 2010, Notice of Proposed Modifications.

Response #1: The Board thanks the commenter for supporting and participating in this rulemaking proceeding.

Comment #CB2: The timing of the proposal in the regulatory process delayed having this information included in the numerous heat illness prevention training sessions that were conducted with the Division across the state during the Spring of 2010. Thus, these provisions have not been implemented for the current summer heat season. Consequently, the commenter recommends that the revised standard take effect after the current summer heat season to allow employers to be properly educated about the provisions and provide this information to their supervisors and employees. Since it is the busiest time of the year for many growers, it would be infeasible to update the training and compliance materials for the current season.

Response #2: The Board concurs and anticipates the new provisions to become effective after the end of summer, in October or later.

John Robinson, CEO, California Attractions and Parks Association, by e-mail and letter dated July 1, 2010

Comment #JR1: The California Attractions and Parks Association (CAPA) recommends that the definition of "Landscaping" should exclude fixed locations with plumbed or otherwise continuously supplied drinking water and means for providing shade or cooling.

Response #1: The Board agrees that fixed establishments with plumbed water whose employees engage in landscaping operations at these sites do not need to comply with subsection (e). Therefore the Board is proposing modified language to the definition in subsection (b) as noted in the Second Notice of Proposed Modifications.

Comment 2: The definition for shade should be modified to state that the examples of shade structures should be combined with the phrase stating that shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions. This change would make the requirement more specific and state what constitutes compliance.

Response #2: The Board had previously removed the examples of what could be considered to provide shade since the examples did not provide clarity with the revised definition. The Board believes the current proposed language provides the needed specificity. Please also see the response to comment #MS1 in the Final Statement of Reasons.

Comment #JR3: The requirement for providing shade in subsection (d) should be modified to allow for the fact that not every outdoor employee has the same risk for heat stress. For example, roofers working with hot tar on an exposed roof and agricultural workers in remote fields do not have a risk comparable to an employee in a theme park who has access to cooling and medical care. The requirement should apply to employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness.

Response #3: This comment is beyond the scope of the first Notice of Proposed Modifications, and therefore, this comment will not be addressed here. Please also refer to the responses to comments #CG1 and #WH1 in the Final Statement of Reasons.

Comment #JR4: The requirement for providing shade should be changed to state that a "means for providing shade" should be required when the outdoor work exceeds 85 degrees, instead of requiring the shade to be present.

Response #4: The process of how to provide shade rather than providing the shade itself was an issue in the initial comments for the proposal and therefore was not part of the first Notice of Proposed Modifications and will not be addressed here. Please also refer to the responses to comments to similar comment #JR3 in the Final Statement of Reasons.

Comment #JR5: The standard should contain a provision dealing with situations where a person responsible for public safety should remain on duty until a relief person arrives.

Response #5: This comment is beyond the scope of the Notice of Proposed Modifications, and therefore, this comment will not be addressed here. Furthermore, the question relates to how the existing standard is enforced. The Division does offer to work with the commenter on discussing this question and the questions raised in #JR6 now or at any time when such enforcement concerns arise. The Board thanks the commenter for his efforts to clarify the standard and continued participation in the rulemaking process.

Comment #JR6: The commenter asked a number of questions about enforcement of the existing standard.

Response #6: The enforcement questions are focused on how the existing standard is enforced and thus outside the scope of the Notice of Proposed Modifications and will not be addressed here. The Division does offer to work with the commenter on discussing these questions now or at any time when such enforcement concerns arise. The Board thanks the commenter for his efforts to clarify the standard and continued participation in the rulemaking process.

Carla J. Gunnin, Constangy, Brooks and Smith, LLP, by e-mail dated July 6, 2010

Comment #CG1: The proposed modification to subsection (a)(2)(E) does not clearly define what is meant by heavy materials. The terms industrial or commercial materials

are vague. A weight limit such as 150 pounds per shipment, for example, should be used to define the heavy materials so employers can determine what qualifies for coverage.

Response #1: The Board believes that the description in the scope should provide adequate guidance for employers. The intent of the requirement is to assure that the employees who deliver and participate in loading or unloading heavy objects have protection against heat illness. A weight limit as described does not distinguish whether that is a total load of a few objects or one item that weighs 150 pounds. The Board declines to make the suggested change.

Comment #CG2: Subsection (d)(3) should not be amended to allow employees to take a cool-down rest when they feel the need to do so as protection from overheating, because this language does not provide a defined trigger and thereby is subject to potential abuse. The language in the current standard referring to a preventative recovery period should be retained, since it has a definition in the standard.

Response #2: This comment is beyond the scope of the first Notice of Proposed Modifications, and therefore, this comment will not be addressed here.

Comment #CG3: The proposed modification of subsection (d) allowing alternative, equivalent procedures for providing shade is vague, because employers are not given guidance as to what procedures are acceptable. In particular, if an employee does not work outside during the entire shift but spends time inside an air-conditioned building, would that be an acceptable alternative? Also, would a vehicle lacking air conditioning, but not in the sun, be an acceptable alternative to shade?

Response #3: This comment is beyond the scope of the first Notice of Proposed Modifications and therefore this comment will not be addressed here.

Comment #CG4: Proposed subsection (e)(1) allows a supervisor to use a cell phone or message texting to contact remotely working employees only if the reception is reliable, but no device is reliable at all times or places. This implies a supervisor must be present if an employee is in an area with poor reception, and there should be a definition for "reliable" as used in this context.

Response #4: The Board notes that an area known to have poor reception for cell phone use renders that method of remote contact unreliable. This issue has been previously discussed in response to comments to the original proposed language, and the Board declines to modify this portion of the proposal.

Comment #CG5: Proposed subsection (f)(1)(I), stating that designating a person to be available to ensure that emergency procedures are invoked when appropriate, is unclear because it suggests a supervisor must be present at all work locations, and the term "available" is not defined.

Response #5: This comment is beyond the scope of the first Notice of Proposed Modifications and therefore this comment will not be addressed here.

Bruce Wick, Director of Risk Management, California Professional Association of Specialty Contractors (CALPASC), by e-mail dated July 6, 2010

Comment #BW1: Although CALPASC does not necessarily agree with all the facets of the proposal, it supports the modifications proposed on June 21, 2010.

Response #1: The Board thanks the commenter for supporting and participating in this rulemaking proceeding.

Lauren Ornelas, Founder/Director, Food Empowerment Project, by e-mail dated July 6, 2010

Comment #LO1: The requirement to provide shade should be modified to require employers who wish to provide alternatives to shade to provide advanced written notice to the Division along with their plan for compliance.

Response #1: One aspect of the problem with erecting shade structures is that a change in the conditions at the given site may occur that will prevent the safe or feasible use of the structures, such as a windstorm or relocation to a highway section that is too narrow for a shade structure. The Board believes that not all situations can be foreseen and noticed in writing in advance of their occurrence. Therefore, the Board declines to make the modification in response to the comment.

Comment #LO2: Since the Division has investigated cases of heat illness occurring at temperatures as low as 75 degrees; a trigger temperature of 70 degrees should be used to prevent heat illness.

Response #2: This comment is beyond the scope of the first Notice of Proposed Modifications and therefore this comment will not be addressed here.

Comment #LO3: The onus for having shade below 85 degrees should be placed on the employer, not the employee.

Response #3: This comment is beyond the scope of the first Notice of Proposed Modifications and therefore this comment will not be addressed here.

Comment #LO4: Workers fear reprisals if they are not constantly working. Requiring mandatory breaks would ensure workers do not get heat illness.

Response #4: The comment is beyond the scope of the first Notice of Proposed Modifications and therefore this comment will not be addressed here.

Betty Hung, Senior Attorney, Employment Law Unit, Legal Aid Foundation of Los Angeles, by e-mail dated July 6, 2010

Comment #BH1: There is insufficient justification given to exempt all but the specified industries from the high heat procedures of subsection (e); there are many industries such as car washes, loading docks, and window washing that have the threat of heat illness. Workers in such industries are subject to factors independent of the type of industry such as pace of work, humidity, and acclimatization. These workers are also likely to be exposed to temperatures reaching or exceeding 95 degrees.

Response #1: The selection of the employment categories that would be required to follow the high heat procedures in subsection (e) was based on the data that was available to the Division for incidence of heat illness cases. The Board believes that this process was based on facts that were available. The data did not show that the categories mentioned in the comment had a high incidence. Therefore the Board declines to make the change.

Comment #BH2: The proposed deletion from subsection (c) of provisions regarding the quality of the water and the requirement to provide it at no cost to the employees should not be made. This deletion would allow unscrupulous employers to charge workers for water, as has been observed by the Foundation in the car wash industry. Also, outdoor workers who are not covered by the Field Sanitation Standard, Section 3457, are not protected from being given warm, foul-tasting water. Consequently, the amendments that had been proposed should be reinstated.

Response #2: The Board believes that existing regulations will enable the Division to require the provision of potable water and that existing law requires that the water be provided at no cost to employees (the “no cost” wording does not appear and is not needed in each specific standard that requires the provision of an employee safeguard).

Comment #BH3: The proposed requirement for providing access to shade is insufficient to protect employees from heat illness. The trigger temperature of 85 degrees is too high. The Division has investigated heat illness cases when the temperature was 75 degrees, and this should be used as the basis for providing shade. The proposal to provide shade for only 25% of the employees at a given time is also not protective since it allows employers to not provide shade during meals and break periods. The language for cool down breaks should be changed to a minimum of ten minutes, and there should be mandatory rest breaks.

Response #3: This comment is beyond the scope of the first Notice of Proposed Modifications, and therefore, this comment will not be addressed here.

Comment #BH4: The exception to subsection (d) is too broad and provides employers with regulatory cover to not provide shade under the guise of feasibility. The justification for the exception was vague. The Board has not set the terms for what is meant by

workers being at a site for a very short period of time. The burden should be on the employer to provide documentation of the need and equivalent procedures to the Division ahead of time, and this should be subject to public review. The Foundation supports the comments of the California Rural Legal Foundation calling for more reasonable exception procedures. Also, employers who wish to utilize the exception should be required to comply with the high heat procedures in subsection (e).

Response #4: The exception to subsection (d) requires flexibility in light of the number of circumstances where it might apply and possible exigencies would make it unworkable for such a prior approval requirement. The Board therefore declines to make the recommended change, and also refers to the response to comment #AK4.

Comment #BH5: The wording proposed in the modification to subsection (f) regarding worker and supervisor training is vague and undermines the training requirements. The phrase "reasonably anticipated to result in exposure to the risk of heat illness" allows an employer to use the excuse of not being able to anticipate the problem. The proposed wording provides a loophole that might not be addressed if the employer were cited because it would then be too late to have the employees trained, after being exposed to heat illness.

Response #5: Although there may be claims that an employer cannot predict hot weather, the Board believes that the employer must provide the training if hot weather suddenly occurs. The onset of a hazardous condition like heat establishes the risk of exposure, and the employer would be required to stop the work and provide training if the employees and supervisors were not trained. Therefore, the Board declines to make additional changes to this subsection.

Ron Bass, by e-mail dated July 6, 2010

Comment #RB1: Subsection (d) currently excludes employers in the agricultural industry from utilizing cooling measures other than shade. There is no rationale for this exclusion, and it leaves agricultural workers unprotected. The materials and equipment for compliance are readily available at reasonable prices.

Response #1: This comment is beyond the scope of the first Notice of Proposed Modifications, and therefore, this comment will not be addressed here.

Marti Fisher, Policy Advocate, Health Care Policy, Unemployment Insurance, Labor & Employment, California Chamber of Commerce *et al*, letter dated July 6, 2010

Comment #MF1: Although the Chamber and Coalition (as identified in the FSOR) share in the commitment to ensure the health and safety of outdoor workers, the Chamber has a few further amendments to suggest. The first is to clarify the definition of landscaping in subsection (b). There should be a distinction between maintenance and grounds keeping from landscaping construction that require more exertion such as installing landscaping

vegetation and the construction of landscaping structures. The definitions should also omit landscaping operations at fixed locations with plumbed drinking water, and means for providing shade or cooling. This would also mean that subsection (a)(1)(C) should be changed to Landscape Construction.

Response #1: Please see the response to #JR1. The Board concurs with the proposed changes and responded to the similar #JR1 comment and will modify the proposal accordingly.

Comment #MF2: The definition of shade should be rephrased to add specificity to the proposed regulations and state what constitutes compliance to ensure better program compliance. Towards this end, the definition for shade should be modified to state that the examples of shade structures should be combined with the phrase stating that shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions.

Response #2: Please see the response to comment #JR2.

Comment #MF3: The commenter supports the proposed modification to subsection (d) that creates an exception for situations in which it is infeasible or unsafe to have shade present continuously. She supports the trigger of 85 degrees with this exception, but does not support a lower temperature trigger.

Response #3: The Board thanks the commenter for supporting and participating in this rulemaking proceeding.

Comment #MF4: The coalition remains concerned about the two tiered system for requiring high heat procedures which will make compliance challenging. They welcome the opportunity to work with the Division to develop guidelines for employers to inform employers how to comply with these provisions.

Response #4: The Board thanks the commenter for offering to implement the proposed modified regulation.

Anne Katten, MPH, Pesticide and Work Safety Project Director, and Michael Meuter, Director of Litigation, Advocacy and Training, California Rural Legal Assistance Foundation, by e-mail dated July 6, 2010

Comment #AK1: The high heat provisions should apply to all outdoor employment. The proposed exceptions should be deleted. The Board did not present a justification for the proposed modifications to high heat coverage.

Response #1: As indicated in the first Notice of Proposed Modification, the limitations on the applicability of the high heat procedures are based on Division experience and on comments received by the Board. The Board continues to find those limitations

reasonable. Therefore, the Board declines to adopt the recommended changes as part of the current regulation.

Comment #AK2: The requirement specifying that employees are to be provided with fresh, pure, and suitably cool water needs to be retained, because it is essential to maintain adequate hydration among workers and is a matter of human decency. The Field Sanitation Standard requires this, and it should apply to the other industries. It is especially important if the water is in containers that give the water a chemical taste as they heat up. The standard also needs to make it clear that charging for drinking water is not allowed. The modification on this point is a step backwards.

Response #2: The Board acknowledges the essential role that drinking water plays in heat illness prevention. However, subsection (c) already references Sections 1524, 3363, and 3457, thereby covering the industry segments affected by Section 3395. The Board believes that the Division can rely upon the appropriate referenced sections for enforcement purposes. Additionally, the obligation to provide water at no cost to the employee has not been a matter of dispute with respect to the current regulations. Therefore, the Board declines to make additional changes to subsection (c).

Comment #AK3: The requirement for access to shade must include the requirement that the employees can cool down without being in contact with the dirt since it is not hygienic and conducts heat to them. The language for shade should include the phrase that employees can sit in a normal posture fully in the shade without having to be in physical contact with each other, “or the ground.”

Response #3: This comment is outside the scope of this 15-Day Notice of Proposed Modifications. Therefore, no response to the comment is provided and no modification of the proposal is necessary.

Comment #AK4: The exception to subsection (d) provides too broad a loophole for a limited need. Worksafe is not aware of any agricultural situations where it would be unsafe to provide shade, and only the concern about roadside shade seems valid. Wind should not be a problem for shade structures because there are weighted footings that can be used. Also, for short term operations such as irrigation there needs to be a narrower set of definitions ahead of time to prevent the Division from being deluged with appeals of citations where employers have abused the application of the exception. The language should be modified to include the requirement that the employer must document the need and the equivalent protection that will be used and send a written document to the Division for approval before the exception is utilized. Also, employers having workers moving to different worksites must provide for carrying and erecting shade unless the employer demonstrates in writing that it is not feasible, and would establish that only operations lasting less than an hour could utilize the exception.

Response #4: The Board believes that the employer has the burden to demonstrate and document the circumstances under which erecting shade is problematic from a feasibility

and or safety perspective. The requirement for employers to submit to the Division a written document for approval does not account for the exigencies and for the variety of circumstances that likely would attach to the use of the exception. Therefore, the Board declines to make additional changes to this subsection.

Comment #AK5: Modifying the timing of providing training to employees and supervisors creates a loophole that will make enforcement difficult and will allow employers to delay or deny the training. The temperate climate in California can trigger the training requirement on any day of the year; if supervisory employees are trained when hired, even in winter, they will be ready for the onset of warm days even if unexpected. Currently, Worksafe continues to encounter crews and supervisors working in the heat who have not been trained.

Response #5: The Board believes that the risk of heat illness during the winter months is much lower and that employees and supervisors that have been trained during the winter might not remember signs and symptoms of heat illness or essential emergency procedures, particularly if the training took place several months before the onset of hot weather. Therefore, the Board declines to make additional changes to this subsection.

Wendy Holt, Vice President, Production Affairs and Safety, Contract Services Administration Trust Fund (CASTF) for the Motion Picture and Television Industry, by e-mail dated July 6, 2010

Comment #WH1: CASTF acknowledges the importance of protecting employees working outdoors, and believe that compliance with the current standard accomplishes that goal. The modifications that establish additional requirements for specific industries would be better suited in each industry's existing vertical standard. This is not unique; there are standards with a broad requirement in the General Industry Safety Orders along with more specific requirements in the specific vertical standard. CSATF fully supports retaining the existing Section 3395 in its current form with industry specific requirements added to the appropriate vertical standards.

Response #1: The Board notes that the proposed rulemaking action suggested by the commenter would require three separate rulemaking procedures that have not been initiated and would therefore have to be proposed as separate regulatory changes at some time in the future. This would only further delay the implementation of the high heat procedures. The Board does not believe that the structure of Section 3395 in its proposed form necessitates such an action since the application of the high heat procedures is stated clearly in subsection (a)(2) and further clarified in subsection (b). The Board thanks the commenter for the recommendation but declines to undertake the commenter's suggested course of action.

Chloe Osmer, Strategic Campaign Coordinator, Community Labor Environmental Action Network (CLEAN), by e-mail dated July 6, 2010

Comment #CO1: The CLEAN opposes the current proposal because it fails to address the needs of California carwash employees. The changes have gone backwards from the 2009 proposal by not including carwash employees in the high heat provision coverage. These employees often work 10 hours per day in direct sunlight with temperatures at 95 degrees and above. They are rarely provided with water, shade or heat illness training by the employers, and they will continue to suffer because they have been excluded from the high heat requirements.

Response #1: Please see the response to comments #BH1 and #AK1.

Comment #CO2: The proposed modification to remove the revised language about potable water will not be adequately supplanted by other existing standards, such as Section 3363. Employees are frequently compelled to purchase water from their employers and are discouraged from taking breaks to drink it. Thus, the standard should clearly state that employers may not charge employees for drinking water.

Response #2: Please see the response to comment #BH2.

Comment #CO3: The change to the subsection (f) regarding the timing of training to occur before doing work that is reasonably anticipated to result in exposure to the risk of heat illness is too subjective and will create an enforcement problem for the Division. Carwash employees are rarely provided training on heat illness and are often completely unprepared to recognize the symptoms or the appropriate corrective or preventive actions.

Response #3: Please see the response to comments #BH5 and #AK5.

Comment #CO4: There were other problems that have not been addressed by the noticed modifications: shade should be provided for the entire workforce on the shift, not just 25%; the trigger for shade should be 75 degrees, not 85 degrees; employees should not have to request shade when the temperature is below 85 degrees; mandatory breaks should be required; the 5 minute breaks are too short.

Response #4: This comment is beyond the scope of the current 15-Day Notice of Proposed Modification, and therefore, this comment will not be addressed.

Michael Smith, Attorney, Worksafe; Pete Greyshock, Coordinator, SoCalCOSH; Wayd La Pearle, President, United Association Local Union #393, Plumbers, Steamfitters & Refrigeration Technicians; by e-mail dated July 6, 2010

Comment #MS1: The commenters oppose the latest proposals for modifying Section 3395. The proposed changes weaken the proposal that was considered by the Board in the Fall of 2009. There are significant deficiencies in this proposal that were present in the last proposal that have not been addressed by the noticed modifications: shade should be provided for the entire workforce on the shift, not just 25%; the trigger for shade should be 75 degrees, not 85 degrees; employees should not have to request shade when the

temperature is below 85 degrees; mandatory breaks should be required; the 5 minute breaks are too short.

Response #1: This comment is beyond the scope of the current 15-Day Notice of Proposed Modifications. Therefore, no response to the comment is provided and no modification of the proposal is necessary.

Comment #MS2: Outdoor work in all industries can cause heat illness depending on the pace of work, humidity, acclimatization and other factors. The industries excluded from the high heat procedures will not be required to provide close supervision of new employees who may not be acclimatized. Lacking this and other high heat provisions will be detrimental to employees in such operations such as loading docks, tree trimming, utilities, car washes, window washers, and others.

Response #2: Please see the response to comment #BH1.

Comment #MS3: The deleted language regarding potable drinking water should be restored. The explanation for the deletion is that the language can be inferred from other standards, but only the Field Sanitation standard has a reference to the water being cool or suitably pure, and employees not covered by Section 3457 would not be protected from being given foul-tasting drinking water. The language of the 2009 proposal should be restored, especially the requirement to provide the water free of charge, so that employers cannot charge employees for drinking water.

Response #3: Please see the response to comments #BH2 and #AK2.

Comment #MS4: The subsection (d) exceptions to providing shade in unsafe or infeasible situations should be modified to prevent unscrupulous employers from abusing this provision. There are situations in which a shade structure can create hazards, but these situations are rare. The commenters endorse the proposal made by CRLA that would require procedures for providing equivalent protection and cooling during cool down rest periods to be documented in writing and approved by the Division prior to the use of the exception. Also, the employers who claim the exception should be required to comply with the high heat requirements in subsection (e) to assure protection for those workers. The subsection should also be modified to indicate that the burden of establishing the feasibility and the suitability of the equivalent protection belongs to the employer; as written, the exception could be interpreted to mean that the burden is on the Division to establish that the shade structure is unsafe or infeasible, and that the alternative measures provide equivalent protection.

Response #4: Please see the response to comment #AK4.

Comment #MS5: The modified language for providing training based on reasonable anticipation of work resulting in exposure to the risk of heat illness will create a very problematic enforcement burden for the Division when confronting the subjective claims

of employers as to what was reasonably anticipated. This will ultimately prevent the training of many supervisory and non-supervisory employees.

Response #5: Please see the response to comment #BH5.

Antonette Benita Cordero, Deputy Attorney General, State of California Department of Justice, by letter dated July 6, 2010

Comment #AC1: It seems that the most recent proposed modifications to Section 3395 will not advance the effort to ensure that thousands of Californians will not be forced to continue to work at undue risk in dangerous heat conditions. This department submitted comments on the proposal of October 2009 that noted the regulation was inadequate because it placed the burden on employees to ask for access to shade and breaks instead of requiring that employers provide them. In conjunction with the common practice of piece rate pay and production incentives, the absence of requirements raise the likelihood that employees will forego needed breaks from heat exposure.

Response #1: This comment is beyond the scope of the present Notice of Proposed Modifications, and therefore, the Board declines to respond.

Comment #AC2: The proposed revisions regarding drinking water only mandate that employers provide access to water which may shift the burden to the employee to ask for water. The requirements regarding the provision of pure water at no cost to the employee were also removed on the assumption that these are inferred by existing regulations.

Response #2: Please see the response to comment #BH2.

Comment #AC3: Before utilizing the proposed exception that would allow the use of alternatives to shade where the provision of shade is hazardous or infeasible, the employer should prove to the satisfaction of the Division that the need to utilize the exception exists and that the proposed shade alternative affords equivalent protection.

Response #3: Please see the response to comment #LO1.

Christopher Walker, Senior Policy Advisor, Nossaman LLP representing California Association of Sheet Metal and Air Conditioning Contractors' National Association (CAL SMACNA), by letter dated July 6, 2010

Comment #CW1: CAL SMACNA supports the existing regulation. CAL SMACNA members routinely deliver fabricated materials by truck and question whether the drivers who are in air conditioned or shaded areas would be covered when they are not being exposed to heat. The new subsection (a)(2)(E) should be stricken.

Response #1: The Board concurs that the category of transportation that was in subsection (a)(2)(E) was too broad and has proposed modifications to clarify that this

applies to drivers who also participate in loading or unloading the vehicles, rather than just driving them. In view of the modification that will clarify this provision, the Board does not believe that subsection (a)(2)(E) should be removed.

Comment #CW2: Providing shade on construction sites will be difficult, because it is not clear which employer will be responsible for providing shade, and which employees should have the priority to use shade that is limited. The regulation should state that providing shade is the responsibility of the general contractor.

Response #2: The Board believes that this regulation should not limit subcontractors to the shade that is provided by a general contractor, as that may not be adequate as the work and staffing on the site change frequently, often on a daily basis. Employers are responsible for assuring that their employees are provided with shade, whether by agreement with the other employers or by providing the shade directly.

Comment #CW3: The provisions in subsection (d)(3) can allow employees to abuse the procedure to take breaks whenever they want to, especially if the procedure is based on the term "overheating," which is not defined. The regulation should define the term or use the phrase "the onset of heat illness."

Response #3: This comment is beyond the scope of the 15-Day Notice, and therefore, the Board declines to respond.

Comment #CW4: Is the general contractor or a subcontractor responsible for compliance with the subsection (d) exception? If the subcontractor is responsible, the terms "alternative procedures" and "equivalent protection" need to be clarified.

Response #4: Please see the response to comment #CW2. This exception applies to a wide variety of possible circumstances, and the Board believes that this breadth of applicability calls for the present general wording of the provision.

Comment #CW5: The high heat requirement for providing close supervision to the extent practicable needs to be clarified. For example, if an employee has to work remotely in an area with poor communication reception, would an extra person have to be hired so that someone could supervise the person in the remote area?

Response #5: This comment is beyond the scope of the 15-Day Notice, and therefore, the Board declines to respond.

Comment #CW6: SMACNA supports the changes to the provision of water portion of the proposal and the change to the training timing requirement.

Response #6: The Board thanks the commenter for participating in this rulemaking process.

Michael Walton, Secretary, Construction Employers' Association (CEA), by facsimile dated July 6, 2010

Comment #MW1: CEA recommends eliminating subsection (a)(2)(E) because it is redundant in the sense that the operations are covered in the preceding four categories listed ((A)-(D)).

Response #1: Although the inclusion of transportation operations can be inferred by the four categories (A)-(D) in subsection (a)(2), there are employers who have trucking operations that are not within those industrial sectors that have employees who are at risk of heat illness. Therefore the Board declines to make the recommended modification.

Comment #MW2: CEA recommends changing the wording in (e)(4) to replace the phrase "close supervision" with the phrase "close observation," because a dictionary defines observation as "an act or instance of regarding attentively or watching," and "observation" would be more appropriate wording.

Response #2: This comment is beyond the scope of the 15-Day Notice, and therefore, the Board declines to respond.

Comment #MW3: CEA seeks clarification as to who is qualified to observe an employee, as required by subsection (e)(2), for signs and symptoms of heat illness, and how the employer can demonstrate compliance with this requirement.

Response #3: This comment is beyond the scope of the 15-Day Notice, and therefore, the Board declines to respond.

Merlyn Calderon, National Vice President, California Political Director, United Farm Workers of America (UFW), by facsimile dated July 6, 2010

Comment #MC1: The UFW supports the comments submitted by the California Rural Legal Assistance regarding the noticed modifications to proposed revisions to Section 3395.

Response #1: Please see the responses to the comments from the California Rural Legal Assistance, comments #AK1-5.

Comment #MC2: The UFW also submits that any changes to the standard will be ineffective unless the farm employees are allowed to choose a representative union. UFW opposes any revisions to the outdoor heat illness standard that do not "include farm workers' ability to enforce the regulations."

Response #2: This comment is outside the scope of this 15-Day Notice of Proposed Modifications. Therefore, no response to the comment will be made.

Ken Nishiyama Atha, Regional Administrator, Occupational Safety and Health Administration, by letter dated July 6, 2010

Comment 1: The Occupational Safety and Health Administration (OSHA) has completed the review of the Proposed Modification for Heat Illness Prevention Notice dated June 21, 2010. Federal standards do not contain a specific regulation for heat illness prevention; therefore the standard is at least as effective as the federal standards.

Response: The Board thanks the commenter for providing the Occupational Safety and Health Administration analysis of the proposal.

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE SECOND 15-DAY NOTICE OF PROPOSED MODIFICATIONS

No further modifications to the information contained in the Initial Statement of Reasons are proposed as a result of the second 15-day Notice of Proposed Modifications mailed on July 14, 2010.

Summary and Response to Written Comments:

John Robinson, CEO, California Attractions and Parks Association (CAPA), by letter dated July 26, 2010

Comment #JR1: CAPA recommends that the definition for shade should be modified to state that the examples of shade structures should be combined with the phrase stating that shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions. This change would make the requirement more specific and state what constitutes compliance.

Response #1: Although this comment does not address changes within the scope of the second Notice of Proposed Modifications, the Board notes that Mr. Robinson should refer to the response to #JR2 in the first Notice of Proposed Modifications which received a response at that time.

Comment #JR2: The requirement for providing shade should be changed to state that a "means for providing shade" should be required when the outdoor work temperature exceeds 85 degrees, instead of requiring the shade to be present. This would apply to subsection (d) and the exception.

Response #2: Although this comment does not address changes within the scope of the second Notice of Proposed Modifications, the Board notes that Mr. Robinson should refer to the response to #JR4 in the first Notice of Proposed Modifications which received a response at that time.

Comment #JR3: The requirement for providing shade in subsection (d) should be modified to allow for the fact that not every outdoor employee has the same risk for heat stress. For example, roofers working with hot tar on an exposed roof and agricultural workers in remote fields do not have a risk comparable to an employee in a theme park who has access to cooling and medical care. The requirement should apply to employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness.

Response #3: Although this comment does not address changes within the scope of the second Notice of Proposed Modifications, the Board notes that Mr. Robinson should refer to the response to #JR3 in the first Notice of Proposed Modifications which received a response at that time.

Comment #JR4: The commenter asked a number of questions about specific enforcement scenarios in the context of the existing standard.

Response #4: The enforcement questions are focused on how the existing standard is enforced and thus outside the scope of the second Notice of Proposed Modifications and will not be addressed here. The Division does offer to work with the commenter on discussing these questions now or at any time when such enforcement concerns arise. The Board thanks the commenter for his efforts to clarify the standard and continued participation in the rulemaking process.

Joel M. Cohen, MPH, CIH, CIHC Board Member, Project Manager and Howard B. Spielman, PE, CIH, CSP, CEHS, CIHC Vice President, California Industrial Hygiene Council (CIHC), by email and letter dated July 21, 2010

Comment #JC1: Even with the proposed modification to subsection (a)(2)(E) which excludes the employees who are only drivers of air-conditioned trucks and limits coverage to the transportation employees who are loading and unloading, the resulting application to the transportation industry makes little sense and should be deleted. Further, if the present wording is retained, “and included in loading and unloading” should be defined.

Response #1: The Board believes that the present wording reasonably identifies the employees who may be at risk of heat illness while making deliveries of heavy objects and that additional qualifiers or criteria would only add confusion, noting the variety of activities potentially at issue. Therefore, the Board declines to change the proposal in response to this comment.

Comment #JC2: The wording of the exception in subsection (d) is not consistent with the wording of the rest of the subsection because the exception has the term “structure” which is not used elsewhere in subsection (d).

Response #2: This comment is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Comment #JC3: The commenters attached other comments that had been directed at the first Notice of Proposed Modifications but were not received by the Board within the time limits specified within the Administrative Procedures Act. These comments included: transportation should not be included in the scope of the standard; the definition of shade should be amended; the provision of water should retain "suitably cool" as a qualifier; access to shade should not be based on 85 degrees as the sole criterion; shade should only be required for 10% of the employees, not 25%; the need for an employee to take a cool-down rest period should be clarified; high heat procedures should not be based on 95 degrees as the sole criterion; the term "effective communication" should not be applied to the transportation employer; and the commenter agreed with the changes made to the training section.

Response #3: Since these comments are outside the scope of the second Notice of Proposed Modifications, they will not be addressed here, but the Board notes that these issues were addressed as responses to various comments received regarding the first Notice and in the Final Statement of Reasons, responses to the 45 day Notice including his own initial comment #JC1.

Anne Katten, MPH, California Rural Legal Assistance (CRLA) Foundation and Michael Meuter, CRLA Inc., by email and letter dated July 28, 2010

Comment #AK1: CRLA is concerned that the modifications in the second Notice of Proposed Modifications narrow the scope of coverage for employers who must comply with subsection (e), and that none of the CRLA recommendations have been incorporated into the standard.

Response #1: The Board believes that the rationale for narrowing the scope of coverage has been explained in response to previous comments. Please see the responses to: #JR1, #BH1, #CG1, #AK1, and #CO1 in the first Notice of Proposed Modifications, and #CW1 in the second Notice. Also, responses to the recommendations of CRLA have been addressed previously.

Comment #AK2: The CRLA analysis of Cal/OSHA data on heat driven incident inspections from 2005 through 2009 (provided to the Board as an attachment) shows that the existing standard and modified proposals fail to address fundamental flaws. The modifications that would address these deficiencies include: 1) requiring shade for only 25% of an outdoor crew, a deficiency which prevents the full crew from accessing the shade even during scheduled meal and rest breaks; 2) inappropriately high triggers of 85 F for having shade erected and 95 F for instituting high heat procedures; 3) voluntary provisions for heat relief periods which will not be utilized by workers concerned about job security and production pressure; 4) specifying an inadequate 5 minutes duration for these relief periods; 5) no requirement for employers to develop comprehensive written

programs to identify, prevent and control heat hazards and 6) a broader than necessary shade access feasibility exception and 7) unjustified limitations on when training is required which will hamper enforcement.

Response #2: Since these comments are outside the scope of the second Notice of Proposed Modifications, they will not be addressed here.

Comment #AK3: There should be a definition for a “heat wave” accompanied by specific requirements for suspending non-essential outdoor work and incentives, and for employers to implement a written program for heat illness prevention.

Response #3: The Board notes that this comment is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Comment #AK4: Employees working on a piece-rate basis should be compensated for required recovery periods by being paid their average piece-rate wage or the applicable minimum wage, whichever is greater, for each rest break and recovery period taken during each pay period, or portion of a pay period, in which they were employed on a piece-rate basis.

Response #4: The Board notes that this comment was made previously and is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Comment #AK5: The employer should provide immediate on-site first aid in the shade for any employee with possible symptoms of heat illness and emergency medical transportation and medical care for any workers suspected to be suffering from heat illness. Workers suspected to be suffering from heat illness must not be left unattended or sent home without medical assessment and authorization.

Response #5: The Board notes that this comment was made previously and is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Lora Jo Foo, Legal Director, Worksafe, Inc., by letter dated July 29, 2010

Comment #LF1: The Board's June 21, 2010, proposed modifications created exemptions of entire industries from the high-heat requirements, leaving only workers in the construction, landscaping, agriculture, oil and gas extraction and transportation industries protected. The July 14, 2010, proposed modifications further narrow high-heat procedure coverage for the transportation and landscaping industries. Worksafe opposes the narrowing of transportation employee coverage as there is in the definition an assumption that job descriptions are fixed, which is not true because drivers often feel pressured to do extra work to keep their jobs.

Response #1: The Board does not believe that the definition is based on job descriptions, but is based on actual activities conducted by the employee. Please see the response to #JC1.

Comment #LF2: Worksafe also opposes narrowing the definition of landscaping by eliminating fixed establishments because it does not assure that the employees have access to the water and shade. Also, since there is little difference between the work done at one fixed establishment as compared with the work done moving between job sites, this distinction should not be adopted.

Response #2: The Board notes that excluding the employers from coverage by subsection (e) does not relieve them of the other requirements of Section 3395 thus requiring an employer at a fixed location to provide employees doing the landscaping with water and access to shade. Please also see the response to comment #JR1 in the first Notice of Proposed Modifications. The Board believes that landscaping crews that are not in fixed locations already equipped with shade and water will often be at sites that have neither, and will therefore be at a much higher risk of heat illness that their employer must address. Consequently, landscaping of this nature would still be covered by subsection (e).

Dana Lahargoue, CEA Safety Committee, Chair, Construction Employers' Association (CEA) by letter dated July 29, 2010

Comment #DL1: CEA recommends eliminating subsection (a)(2)(E) because it is redundant in the sense that the operations are covered in the preceding four categories listed ((A)-(D)).

Response #1: The Board notes that this comment was made in response to the previous Notice. The Board reiterates that although the inclusion of transportation operations can be inferred by the four categories (A)-(D) in subsection (a)(2), there are employers who have trucking operations that are not within those industrial sectors, and those employers have employees who are at risk of heat illness. Therefore, the Board declines to make the recommended modification.

Comment #DL2: CEA recommends changing the wording in (e)(4) to replace the phrase "close supervision" with the phrase "close observation," because a dictionary defines observation as "an act or instance of regarding attentively or watching," and "observation" would be more appropriate wording.

Response #2: The Board notes that this comment was made previously and is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Comment #DL3: CEA seeks clarification as to who is qualified to observe an employee, as required by subsection (e)(2), for signs and symptoms of heat illness, and how the employer can demonstrate compliance with this requirement.

Response #3: The Board notes that this comment was made previously and is outside the scope of the second Notice of Proposed Modifications, and therefore will not be addressed here.

Dave Harrison, Director of Safety, Operating Engineers Local 3, by email dated July 29, 2010

Comment #DH1: The Operating Engineers Local 3 previously asked for an exception to subsection (d) for employers who could demonstrate that erecting shade would create an unsafe condition. They also asked for an exception based on using a "shade upon request" approach, but this has not been included in proposed modifications. Yet, the operating engineers believe the language is now sufficient and support the proposal as written.

Response #1: The Board thanks Mr. Harrison for his support and participation in this rulemaking.

Bruce Wick, California Professional Association of Specialty Contractors (CALPASC), by letter dated July 29, 2010

Comment #BW1: Though CALPASC does not necessarily agree with all the facets of the proposal, the Association supports the modifications proposed on June 21, 2010, and stresses the importance of the Division proactively establishing for the construction industry the parameters for complying with the exception to subsection (d).

Response #1: The Board thanks CALPASC for their continued involvement in this rulemaking.

Antonette Benita Cordero, Deputy Attorney General, State of California, Department of Justice, by letter dated July 29, 2010

Comment #AC1: This department submitted comments on the proposal of October 2009, that noted the regulation was inadequate because it placed the burden on employees to ask for access to shade and breaks instead of requiring that employers provide them. In conjunction with the common practice of piece rate pay and production incentives, the absence of requirements raise the likelihood that employees will forego needed breaks from heat exposure.

Response #1: This comment is beyond the scope of the second Notice of Proposed Modifications, and therefore, the Board will not respond here.

Comment #AC2: The proposed revisions regarding drinking water only mandate that employers provide access to water. The requirements regarding the provision of pure water at no cost to the employee were also removed on the assumption that these are inferred by existing regulations.

Response #2: This comment is beyond the scope of the second Notice of Proposed Modifications, and therefore, the Board will not respond here.

Comment #AC3: Before utilizing the proposed exception that would allow the use of alternatives to shade where the provision of shade is hazardous or infeasible, the employer should prove that the need to utilize the exception exists and that the proposed shade alternative affords equivalent protection.

Response #3: This comment is beyond the scope of the second Notice of Proposed Modifications, and therefore the Board will not respond here.

Comment #AC4: The modifications that narrowed the coverage of industries by subsection (e) have further weakened the standard and should not be made.

Response #4: Please see the response to #AK1.

Giev Kaskhooli, Third Vice President, United Farm Workers (UFW) of America, by email dated July 29, 2010

Comment #GK1: The UFW supports the comments submitted by CRLA.

Response #1: Please see the responses to the comments from Anne Katten, CRLA.

Comment #GK2: The UFW repeats their previous comments made on July 8, 2010.

Response #2: These comments are beyond the scope of the second Notice of Proposed Modifications, and therefore the Board will not respond here.

Ron Bass, by letter dated July 29, 2010

Comment #RB1: The standard does not specify a minimum number of employees that would trigger coverage, and this may be used by employers to avoid compliance with the requirements.

Response #1: The Board believes that, since no minimum number of employees is specified by the regulation, there is no basis for an employer to make that assumption and declines to make a modification in response to the comment.

Comment #RB2: Exception (1) in subsection (d) will allow employers to use infeasibility as an excuse to not provide shade. Similarly, Exception (2) should not restrict agricultural

employers from utilizing methods of cooling other than shade because this restriction prevents many workers from having effective relief from heat illness since shade alone does not actually cool a person; misting machines and other mobile devices should be allowed for agriculture.

Response #2: This comment is outside the scope of the second Notice of Proposed Modifications and will not be addressed here.

Comment #RB3: The provision of water should include a requirement that each employee is given an individual container for the water for their sole use because this would prevent unscrupulous employers from providing water with unacceptable methods such as providing one cup to be used with a fountain or no cups for a large container of water.

Response #3: This comment is outside the scope of the second Notice of Proposed Modifications and will not be addressed here.

Wendy Holt, Vice President, Production Affairs and Safety, Contract Services Administration Trust Fund (CSATF), by email on July 29. 2010

Comment #WH1: The scope and application of Section 3395 have been modified to specify in subsection (a)(1) that this standard applies to all outdoor places of employment and offers the "EXCEPTION: If an industry is not listed in subsection (a)(2), employers in that industry are not required to comply with subsection (e), High-heat procedures." The industries listed under (a)(2) are subject to all provisions of the standard, including subsection (e), High-heat procedures. CSATF is writing to confirm that the Motion Picture and Television industry and all of its associated construction and transportation activities are not subject to subpart (a)(2).

Response #1: The Board intends for this description to apply to employers whose employees are primarily engaged in the work described. The commenter's industry is not listed in subsection (a)(2). Therefore, work in the Motion Picture and Television industry would not generally be subject to this requirement.

Mary Gene Ryan, California State Association of Occupational Health Nurses (CSAOHN), by email dated July 29, 2010

Comment #MR1: CSAOHN recommends that the Standard incorporate additional verbiage to address assessing heat illness symptoms objectively using the individual's pulse per NIOSH recommendations. A person with a pulse of 90 or higher needs to rest until the pulse goes down to the target or resting pulse. If someone's pulse does not go down, after another 15 minute rest period, the person should be medically evaluated.

Response: The Board notes that this issue is not within the scope of the second Notice of Proposed Modifications and will not be addressed here.

Ken Nishiyama Atha, Regional Administrator, Occupational Safety and Health Administration, by letter dated July 22, 2010

Comment #KA1: The Occupational Safety and Health Administration (OSHA) has completed the review of the second Proposed Modification for Heat Illness Prevention Notice dated July 14, 2010. Federal standards do not contain a specific regulation for heat illness prevention; therefore, the standard is at least as effective as the federal standards.

Response #1: The Board thanks the commenter for providing the Occupational Safety and Health Administration analysis of the proposal.

Marti Fisher, Cal Chamber Coalition, by email dated July 29, 2010

Comment #MS1: Although the Coalition continues to be concerned about creating a two tiered trigger system which could create further liability and burdens for employers which the Coalition believes will make compliance challenging, they are in support of the amended changes to Section 3395. They hope to work with the Division to produce clear compliance guidelines.

Response: The Board thanks the Coalition for their continued support and participation in this rulemaking process.

ADDITIONAL DOCUMENTS RELIED UPON

None.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

DETERMINATION OF MANDATE

These standards do not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed standard. No alternative considered by the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the adopted action.